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THE

MARYLAND FARMER:

DEVOTED TO

Agriculture, Horticulture, Rural Economy & Mechanic Arts.

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THE CROPS OF THE SEASON---THE WHEAT CROP IN MARYLAND.

We have no doubt that a portion of the grain harvested during the past season has already found its way to market, but the great bulk of it has certainly been kept back, either in consequence of the press of other work, or with the hope that prices would rise. The wheat crop generally of the past season is far from being as good a one as most persons anticipated it would be, and as newspaper reports at one time made it out. Still it must not be supposed from this fact that prices will rule high. The hay crop has been enormous; the corn crop in most sections will turn out a full average; and oats and potatoes have both done remarkably well. In addition to this, the foreign demand will be light. The English crops have now been harvested, and notwithstanding the fears that were prevalent at one time; in consequence of the wetness of the season, the hot, dry weather of the latter part of July and the early part of August, has proven of signal advantage, and nearly an average crop of wheat has been secured. In France, the wheat crop has turned out badly, but the deficiency can be made up more cheaply from the Baltic and Black Seas than from the United States. In other times this might not have been the case, but the inflation of our currency has carried up the price at home beyond the point at which wheat can be exported in large quantities at a profit. There remains, therefore, the home consumption alone to depend upon, and as the country was bare of supplies the demand for domestic use will be correspondingly large. Nevertheless, it is altogether improbable that the price of wheat will rule as high as it did last season, because of the abundance of other crops, and especially of corn, whereby the consumption of wheat will be reduced. We must also take into account the fact that a very large breadth of land at the South was seeded down to cereals last season, and that if the wheat there has been considerably less than an average crop, corn and sweet potatoes have yielded very heavily. The demand for breadstuffs on the part of the Southern planters is therefore not

likely to be very great, so that the great bulk of the cereals of the West and Northwest must find their market not at the South, as was formerly the case when planters turned their attention almost exclusively to cotton, but in the Middle and Eastern States. Here in Maryland the deficient wheat crop of the season of 1866 has not found a compensation in the crop which has recently been harvested. On the contrary, the reports which reach us from the Eastern and Western Shores indicate that the crop in those sections of the State, at the best, will be considerably below an average one. This, with us, will keep up prices to some extent, and will give our farmers the extra profit of the difference in the cost of importing wheat or flour from other States that have a large surplus for sale, and herein lies the advantage which the farmers of Virginia and Maryland have over those of the Western and Northwestern States.—Whatever we have for sale finds a ready market at cheap rates of transportation, either by water or by rail, whereas the cost to the Western or Northwestern farmers of moving their crops eastward, now that the Southern market is virtually closed to them, eats up so much of the profit of production that at this very time corn is selling in some parts of Iowa and Minnesota at eight cents a bushel.

COMMON SALT.—The mode of action of this substance is uncertain as yet, but experience has shown that it is a very useful application on all soils that have a tendency to produce crops of wheat liable to be *straw-fallen*. It gives a clean, strong straw, increases the weight of the grain, and imparts such vigor to the crops on which it should be used as to render them much more free from loss by attacks from insects or by unfavorable weather, than otherwise they would be. It also acts as a manure by dissolving the phosphate of lime which may exist in the soil, and thus rendering it available to plants. It should be applied in the latter part of winter or early in the spring, when the wheat crop first begins its growth after the cold weather. The quantity to be applied annually is about two bushels, at intervals of about three weeks.—*Prof. James Higgins,*

STOCK RAISING AND THE CULTIVATION OF THE GRASSES.

DRAKE'S BRANCH, Charlotte Co., Va. }
June 17, 1867. }

To the editors of the Maryland Farmer :

I will be obliged to you to give me what information you possess on the subject of the "Cultivation of Grasses." Our lands are peculiarly adapted to the cultivation of tobacco, and this has been our only staple, but our Northern friends and brethren have deprived us of the only labor with which it can be cultivated profitably, at the same time that they kindly relieved us of all of our blooded horses, the only stock we know how to raise. I don't see anything left to us but to rely on crops which offer the surest means of living.

I want to read your paper to learn something of stock and grass raising.

I want to know the kinds of grass (except clover) best adapted to clay lands, time and mode of sowing, quantity of seed per acre, &c. But to come more to the point of immediate interest to me, I have a field now in oats which I wish to sow in grass for grazing next spring and summer. Can it be done? and if so, the kind of grass, time of sowing and quantity per acre? Will the millet or Hungarian grass answer?

Pardon me for trespassing so much on your time. My only apology must be that I want the information, and presume that you can and will give it.

REMARKS.

Clay lands in your section of country, and north of you, that will grow good crops of tobacco will grow fine crops of grass. The reason is obvious—good tobacco lands abound in potash, and hence it is that virgin soils grow the largest crops of tobacco, from the fact that such soils, if naturally rich, contain all the constituents that tobacco requires. But whilst tobacco lands can readily be converted into grass lands so long as they retain a good proportion of potash and the phosphates, yet it is well known that continuous culture of such lands in tobacco rapidly exhausts the soil of these important elements of fertility, and under such circumstances the grasses will not flourish unless they are renovated by a liberal application of wood ashes and bone earth.—This may be effected either by applying directly to the soil wood ashes and finely crushed bone, or indirectly in the shape of composts and commercial super-phosphates. But no lands will grow profitable crops of grass that have been exhausted of their potash and the phosphates by frequent cropping in tobacco.

We are, however, somewhat at a loss to understand our correspondent when he links clay lands and the cultivation of tobacco together. If he has been accustomed in his section to grow tobacco on clay lands it must have been on soils that are not with us ordinarily classed as clays loams, for clays properly so called would be too heavy, compact and adhesive to grow tobacco profitably. If, then, he means by a clay soil a soil sufficiently close to render

it retentive of moisture, and yet containing sand enough to give it quickness, such a soil would also be admirably adapted to the grasses, provided that to bacco had not been cultivated on it to excess.

With such "clay lands" the first thing to do would be to lime them. A generous dressing of lime would liberate fresh supplies of potash that otherwise would remain insoluble in the soil, and would be the best preparation for laying the land down to grass, as our correspondent proposes to do. But we should not depend upon liming alone. We should make composts of one-third barn-yard manure and two-thirds woods mould, marsh muck, turf of head-lands, leaves, and any rough, fibrous material, to which all the wood ashes made on the premises, or capable of being collected in the vicinity, might be added with advantage. The best essay known to us on the subject of grasses and their cultivation is that which Dr. Gould delivered at Yale College some seven or eight years ago. It was in the form of a lecture, and he laid down the following propositions as rules which ought to govern those who are laying their lands down to grass. Assuming the land to be clean and in good condition, he contends :

1st. That a variety of grass seeds should be sown, because by this mixture heavier crops are obtained, and the mixed herbage is more nutritious to all kinds of stock.

2d. That only those grasses should be sown which mature at the same time, and that if cut for hay they should be cut at the period of blossoming, to prevent as much as possible exhaustion of the land.

3d. That the sort of grasses seeded should be such as are adapted to the land and the climate.

The other propositions laid down by him are of lesser moment, and we shall not therefore, at this time, refer to them.

In connection with this subject Dr. Gould gives a list of the grasses that are best adapted to each particular soil and to cutting for hay, in succession—some ripening early and some late. But as the list is more scientific than practical—in as much as the greater portion of the grass seeds referred to cannot be obtained at our seed stores, and would rarely be called for by our farmers even if a supply were to be had, it is scarcely worth while to publish what would be of no service to our correspondent or to our readers generally.

Of all the cultivated grasses, the best in our opinion, as *pasturage for stock*, leaving out clover, may be counted on the fingers of one hand. These are Timothy, Orchard Grass, Kentucky Blue Grass, Red-top and Meadow Oat. We are perfectly aware that these do not mature at the same time, but this would be of no importance where the land is intended for permanent pasture. All these grasses would grow well on such lands as our correspondent refers to, if we

are not wholly mistaken in its texture, and we cannot but think that both himself and others would find it decidedly to their advantage to turn their attention, as he seems inclined to do, to stock raising and the cultivation of the grasses. One word more and we have done. Our correspondent desires particularly to know whether he can break up his oat land of this season and sow in grass for grazing next spring and summer. No stock of any kind should be allowed to pasture grass land during the first summer after seeding. Late in the fall the land may be pastured lightly, but it is far better to allow the roots to spread and a good sod to be formed before turning on heavy stock. Another rule—Fields intended for winter pasture should be lightly grazed during the summer, and the same rule will apply to fields that are summer pastured. During a portion of each year the land must have absolute rest.

P. S.—The millet or Hungarian grass referred to would answer quite well for a single season, when there is a dearth of hay, but neither is desirable otherwise.

POULTRY—THEIR TREATMENT AND FOOD.

Who that has once lived in the country has not in his recollection, many an old fashioned farm house with its cluster of out-buildings, and prominent among these the barn and wagon shed? Who does not remember also, how often he has remarked the little care and attention that was given to the poultry, and how often for want of proper shelter they have been suffered to roost in out of the way places, under cover, or in the trees and bushes? In the summer, this open air exposure may not be of much consequence, but in winter, they suffer greatly. A scanty and insufficient supply of food is doled out to them. Exposed to the weather, the survivors become hardy, but tough for table use. Neglected in the manner of their feeding and in the fitness of their food, they cease to lay often. From all these causes they degenerate and in a short time, instead of being a source of profit are, as contrasted with what they might have been if properly attended to, are nearly useless. A profitable source of income is thus thrown away—how profitable, the careful economy of the French peasants will presently teach us.

The rearing of poultry and the saving of eggs for market may seem a small matter of domestic management to be left to the farmer's household. In France, however, it is thought to be of importance, and is made to yield a large revenue in the exportation of eggs alone—six millions of eggs are on an average being sent from France to England every week. The French are undoubtedly the best breeders of poultry in the world. They undersell the English breeders even with the drawback of freight

and the necessity of sending their produce across the channel.

A very romantic story was current in France a short time ago concerning a certain M. de Sora of an ancient family who had lost all of his estate, except a dilapidated Chateau and a small demesne surrounding it. Something must be done, it was obvious, but what? nothing, however, is impossible to a Frenchman—so at least the story-tellers will have it. The fertile brain of M. de Sora was not long in finding an expedient. He resolved to make the humble poultry-yard the means of restoring the Chateau of his ancestors to its former state. He discovered—so we are told—that if hens did not lay every day, even in winter, it was because they lacked their accustomed food, of bugs, worms, and insects generally. He immediately made them lay every day by feeding them on horse-flesh. He began with three hundred hens—we are following the story—he soon had three thousand. Immense cutting machines turned twenty-two horses daily into mince meat. The hoofs, &c., were sold to certain parties—the marrow, &c., to certain other parties, to be used in manufactures. These paid the expenses of the carcasses, leaving the cost of the meat nothing. The profit on the sale of the fowls, was said to be enormous.

Dazzled by these revelations, parties set out from England to seek this new El Dorado of a poultry yard. After careful search no M. de Sora was to be found. He was a myth. He vanished, taking his poultry, his profits, his cutting machine, and all with him. However—as in the search for an older and more famous El Dorado—much valuable information was gathered by the explorers. A M. Manoury was found at Mony raising as many as five thousand chickens a year, and on many French farms as many as a hundred Turkeys were counted, each with its brood of chickens. Each turkey could take charge of twenty-four chickens at a time, whilst a hen can only be safely trusted with twelve. These turkeys are kept hatching the eggs of hens at regular intervals for six months of the year; the hens meanwhile remaining free to lay. The way these ingenious Frenchmen beguile the turkeys into assuming the duties of foster mothers is curious, and is hard to credit, although it is asserted on good authority to be true.

When a turkey has been engaged for some months in the business of hatching, and shows a disposition to leave off, a glassful of wine is given her in the evening and a number of chickens substituted for the eggs. On finding them beneath her in the morning she takes to them kindly and leads them about with the dignity of a drum-major. When, however, a troop leader is required that has not been hatching, it is customary to pluck some of the

feathers from her breast, to give her, as in the previous instance, a glass of wine, and whilst in the fuddled condition which follows her vinous potation to place some chickens under her. On getting sober next morning she feels that some sudden change has come over her, and as the part denuded of feathers is kept warm by the chickens she soon takes kindly to them. Of French fowls the *la Bresse* of Burgundy—remarkable for the smallness of its bone and the plumpness of its flesh—is beyond doubt the best. They are good layers, and in shape and size resemble the *Gray Dorkings*. Their flesh is tender and loses little in the cooking—the ideal of excellence among the French, as gauchness of feather is apt to be among the English. These *la Bresse* fowls, however, would hardly stand our severe winters, as they thrive best in the south of France. Their usual food is buckwheat and maize, Indian corn.—The grain given in France is generally boiled when given to fowls in the process of fattening them.—That the boiled grain is better than the dry is far from having been established. Experiments in this country have however proved its economy in the feeding of corn, barley or wheat. There is no saving in boiling oats, buckwheat or rye. Corn especially is more profitably used when boiled than when given raw, and in very cold weather it is better to feed it to the fowls hot. With some poultry breeders the water in which the corn is cooked is given to the fowls to drink.

If fowls have a grass plot to ramble over the expense of keeping them can be reduced one-half. It is a mistake, however, to suppose that fowls have a partiality for any thing that is green, or have no preferences. They are tolerably indiscriminate feeders it is true, but they should not be suffered to partake too much of green food, as an excess of this species of food has a tendency to relax and scour them, and is therefore injurious. The leavings of the kitchen and dining-room, fragments of meat, bread, pie-crust, biscuit, &c., should always be preserved for them. When grubs and insects are not to be procured by them they should have finely chopped fresh meat doled out to them sparingly, but it is doubtful whether in any other season than the winter, meat, other than leavings of the table, is at all desirable. Finally, the great secret of raising fowls, apart from feeding them when they cannot range abroad, or whilst they are being fattened for market, is to provide for them warm quarters and clean nests.

TRAPPING GRUBS IN A SANDY SOIL.—Prepare the soil for planting cabbage plants, and two or three days previous to transplanting, pluck a leaf from each plant and strew them over the prepared ground; and in the evening go with a lantern and pick up the loathsome plant destroyers; do this two or three evenings, and your plants will do well if properly attended to.—*Ex.*

Harford County, Maryland, Farming.

A correspondent of the *Country Gentleman*, near Glenville, Harford County, Maryland, gives the following outline of the system of farming there practiced:

“Rotation—sod for corn, followed by wheat in the autumn; some drill in, others put in with shovel plow, cultivator, &c. Others put oats in corn stubble, and wheat again, and then seed down to grass. There is a great deal of ground bone used in this county for corn and wheat, costing about \$48 per ton—some putting on as much as half a ton to the acre, to the two crops. Consequently the farms are improving very fast, and there are heavy crops raised. There are a good many cattle fed, and our *Deer Creek* cattle will compare favorably in the Philadelphia market with those from Chester county. There is not as much attention paid to the *manure crop* as there should be, by many farmers—a considerable number wintering their stock cattle in the field—many of them being good farmers in most other respects.”

THE BOUGHTON WHEAT.—A correspondent of the *Monthly Agricultural Report* in Duplin county, N. C., says:—Last fall I received from the department a small bag of Tappahannock or early Boughton wheat. This wheat (about one quart) I sowed in drills, eighteen inches apart, on the 15th of October. The land was a stiff, sandy loam, as fertile as land can well be made here. Immediately after the wheat came up the grasshoppers destroyed about one-fourth of it. In February I gave the wheat a top dressing of guano and phosphate of lime, mixed at the rate of two hundred pounds to the acre. In April the rabbits destroyed nearly one-fourth of the remainder. The wheat headed out the last week in April, and in May took the rust on the blades, injuring it to some extent. On the 10th of June I harvested the crop, obtaining a yield of three bushels and one peck of wheat from the one quart of seed—one hundred and twenty fold—an enormous yield for this section. The wheat grew, on an average, five feet in height, and ripened ten days earlier than our fall wheat. I think in an earlier spring it would ripen twenty days in advance of our common wheat, and ordinarily it would ripen early enough to escape the red rust, which is the greatest drawback we have to contend with in wheat-raising.

SUNFLOWER SEED.—Those who have sunflower seed going to waste, says the *Rural New Yorker*, will find it to their advantage to feed it to their fowls. Where poultry raising is made a speciality it will pay well to raise sunflower seed for feeding the fowls. They will eat it in preference to corn.

Our Agricultural Calendar.

Farm Work for October.

The month of October usually marks, in the Middle States, the closing of farming operations in the field. The ingathering of the later crops still continues. Late potatoes, late corn, and the various roots for winter use and storage, should now be taken up and put away before they are touched by the frost. The mode of securing these should be carefully considered, and a dry and well protected place chosen. There should be no bruising of the roots lest a portion of them should rot and the remainder become injured by contact. The seeding of winter wheat in many localities, where earlier seeding would be prejudicial on account of the fly, will continue during the first half of the month, and if the turnips, parsnips and carrots are backward they may be permitted to remain in the ground a short time longer. Carrots and parsnips especially will not suffer from slight frost, but on the contrary be benefited, as the saccharine matter in them is more fully developed in cold weather. But carrots should not be allowed to remain too long in the ground after the frosts set in, as they are less hardy than the parsnip, which will brave an ordinary winter with impunity. Where the turnips are too small to gather they may be protected with a light covering of straw or leaves, and if the winter is not very severe they will pass through it without being killed out, and will furnish an abundant supply of turnip tops for the table or for the market early in the spring. The autumn fruits should all be gathered during this month—and new orchards and plantations of small fruits may be set out, or preparation may be made so as to expedite this work early in the spring. The work for the month is as follows.

WHEAT.

We have already given in previous numbers of *THE FARMER* such explicit directions for the preparation of the land, the proper kinds of fertilizers, and concerning the best method of seeding down to wheat, that any further details would be superfluous. We may say here however, that the best soil for wheat is a fertile loam, containing a good admixture of clay, and with a dry and sound subsoil—that the best preparatory crop is a clover ley turned well under, as it contains all the constituents that the wheat plant requires; that where the land is thin such fertilizers as abound in potash, lime and the phosphates, with a moderate amount of ammonia are to be preferred; and that where barn-yard manure is used liberally, it would have been better to have applied it to the preceding crop rather than directly to the wheat. As to the mode of seeding,

experience has proven conclusively that wheat drilled in produces usually the heaviest crops from the smallest amount of seed. The preparation of the land should always be thorough, and where oats have been taken off as is often the case, no good farmer will content himself with a single ploughing for wheat. In this case the first ploughing should take place late in July, or very early in August, and the second ploughing towards the middle of September.

RYE.

Rye may still be seeded, but not to as much advantage as if the seeding had taken place before the close of August, or early in September. Still there are frequent occasions when this cannot be done, and when such occur the growth of the plants should be stimulated by an extra supply of manure. The best soil for rye, is a rich alluvial bottom, or a light sandy loam, in good condition—in brief a good corn soil.

Planting Out New Orchards---Small Fruits.

Wherever old orchards are dying out, or it is desirable to plant out new ones, the opportunity should be seized at once to do so. The business of canning fruits, which is now carried on extensively, has very largely increased the demand for all the finer qualities of fruit. It is somewhat remarkable that small fruits, such as raspberries, strawberries, grapes, &c., should be so much neglected when a ready sale might be found at a good profit for many times the quantity of these fruits that now find their way to a market. In the neighborhood of large cities in Europe many hundreds of acres are devoted to this culture, although there is no market there for hermetically sealed fruits, and the prices, as compared with those paid here, are quite low.

BARN YARDS.

It has often been said that the manure heap is the Farmer's Bank. Rough fodder, the scrapings of ditches, marsh mud, leaves from the woods and woods' mould—all of these that can be obtained should be hauled into the barn yard and spread over its surface at least a couple of feet in depth when closely packed together. Keep the centre dish shaped; cover this from time to time with the droppings of the horse and cow stables, and broadcast plaster over the mass occasionally to retain the ammonia. As the winter advances, haul from the woods additional supplies of leaves and woods' earth, and cover the barn yard with a fresh layer, combined with all the refuse straw and other rough absorbents that can be got together. If this be properly attended to there will be no lack of manure of a good quality to spread over the fields that may be destined for corn in the spring.

Harvesting Roots and Pumpkins.

We have already mentioned that field pumpkins and other roots should now be housed.

CATTLE SHEDS.

Good warm shelter is equivalent to extra feeding. Cattle sheds are, therefore, economical in the best sense, and wherever they are wanting should be constructed at once.

WET LANDS.

Low meadows lose more than one-half of their natural fertility if they are imperfectly drained of standing water. None but the courser grasses will grow in marshy places. As the season has now been reached at which soils may be successfully drained, and thus rendered sweet, wholesome and salubrious and productive, it is a matter of duty, independent of other considerations, to have a sufficient number of ditches dug and drains laid to remove the surplus water.

BUCKWHEAT.

Be careful to have the ripening buckwheat harvested before frost. The best period for saving this grain is when about half the heads have turned a deep chestnut brown. We do not think the straw of much value, but it offers a rough and not unpalatable food for cattle during the winter.

MISCELLANEOUS.

Fences.—See that these are all in good order.—Repair weak places, replace broken rails with new ones, and substitute sound posts for such as may have rotted off at the butts.

Fall Ploughing.—Strong, stiff clays are improved by fall ploughing, but in no case should light, sandy soils be thrown open to the action of winter.

Garden Work for October.

Winter Spinach.—Thin out the growing crop of winter spinach if the plants are sufficiently advanced to five inches apart, and keep the soil light and free of weeds.

Lettuce.—Young lettuce plants will now thrive best by being transplanted to a warm southern border, where they can be protected on the approach of frost.

Setting Out Cabbage Plants.—During the first week in October, and not later than the second, select a piece of dry, loamy soil and spread over it to the depth of three inches the richest barn-yard manure that is to be had. Spade the soil at least twelve inches deep, and rake it thoroughly as you proceed. When this work is finished, lay off the land into ridges four inches high with a hoe, and three inches apart from the crown of one ridge to the crown of another. Let these ridges run east and west, so that their faces should be north and south, respectively. As you finish each ridge with the hoe, pat it carefully down to compress the earth and to keep it from crumbling. When all your ridges are formed, take your plants from the bed

where they have been growing and set them six inches apart on the north side of the ridge, and rather more than half-way down the slope. Towards the close of November, strew long stable manure at the bottom of the intervals between the ridges for the protection and nourishment of the plants during the winter. When spring opens break down the tops of the ridges into the intervals where the manure has been lying all the winter and work between the rows with the hoe to lighten the soil and stimulate the growth of the plants. As the latter increase in size thin them out until they stand two feet apart in the rows, using the surplus plants for table purposes in the early spring. At the second working give the plants a slight hilling, and continue to work them at intervals as the season progresses.

Endives.—These should be tied up for blanching.

Mint.—Set out mint in frames for winter use.

Asparagus Beds.—Cut off the asparagus haulm as soon as it begins to turn yellow, and clean off all weeds and grass. Strew over the bed a heavy dressing of well rotted manure and fork it in carefully; rake all clean. In the spring repeat the dressing and rake as before. Finally, spread broadcast over the bed a liberal mixture of equal parts of salt and ashes.

Celery.—Earth up celery for blanching.

Rhubarb and Sea Kale.—Sow seeds of both these plants.

Shallots, Garlic, Chives.—Set out these early in the month.

Onions.—Onions designed for seed may now be set out.

Raspberries.—About the 15th of October will be found an appropriate time for setting out a new plantation of raspberries.

Gooseberries and Currants.—Plant out these fruits at a distance of six feet apart.

Strawberries.—Clean off and top-dress the strawberry beds with woods mould and leaves mixed with leached or unleached wood ashes.

CHANGE OF COTTON SEEDS.—A correspondent of the Agricultural Department, writing from Henderson county, Texas, says: "I know from experience that a change of cotton seed, much more than climate, affects the quality and quantity of the crop produced. Let any one who cultivates sandy land, where the cotton stalks grow tall, (and it grows as the timber grows,) exchange cotton seed every two or three years with his neighbor who cultivates stiff, limy land, where the cotton spreads and the joints are short, and both parties will be convinced of the advantage. A stranger, the first year, could point out the row where the exchanged seeds begin.—The same is equally true of corn, wheat, rye, and barley."

AN ESSAY ON THE CULTURE AND MANAGEMENT OF TOBACCO.

By W. W. W. BOWIE, of Prince Georges Co., Md.

We reprint below for the benefit of our readers "An Essay on the Culture and Management of Tobacco," by Mr. W. W. W. Bowie, of Maryland. This essay, although published in the old *American Farmer* of 1854, still remains the best that has been written on the subject. It is clear, precise and thoroughly practical. Mr. Bowie's essay with that by Mr. Oliver N. Bryan, also of Maryland, written in the same year, and published six months later in the *Farmer*, has had the honor of being mutilated and misinterpreted by the Bureau of Agriculture at Washington. We propose to reproduce the latter essay also in the course of a short time, as a companion to that by Mr. Bowie. Taken together they present a larger amount of really valuable information than is to be found in the same compass any where else. We are sure that with the renewed interest that has sprung up of late in the culture of Tobacco, both these essays will give increase of knowledge to those tobacco planters who desire to profit by the mature experience of others, and will be welcomed even by those whose method of culture does not differ materially from that laid down by the excellent writers in question.—[EDS. MD. FAR.

In the preparation of this Essay, the author admits frankly that he has availed himself of the experience of many successful Planters, whose practice and example he had endeavored for years to follow; and he has also availed himself of much of the matter in his former Essays on this subject, having seen since they were written, nothing to change his views therein expressed in regard to the culture of this great staple of Maryland. And he would state merely by way of giving force and character to his suggestions, that it is well known in the community in which he lives, that from his boyhood he has been familiar with the growing and general management of Tobacco; and for fifteen years past has himself extensively cultivated it.—With these preliminary remarks he will endeavor to give a plain, succinct and intelligible account of that culture and management of Tobacco which he deems the best system for planters to pursue, keeping in view successively the points desired to be touched upon, as set forth in the terms of the liberal offer of Mr. Jose Joachim De Arietta, in the *American Farmer* for September, 1853.

1ST AND 2D.—HOW TO RAISE THE BEST SEED—WHAT, IF ANY, PREPARATION IS IT TO BE SUBJECTED TO?

The earliest and largest plants should be selected

for seed. One hundred plants will give over a peck of seed. Twice as many should be turned out as may be needed, so that after they are in full flower or bloom, the best plants of the whole may be chosen and the rest broken off. If the grower wishes to raise fine, light, yellow tobacco, he ought to select plants that grow quick, with leaves small stemmed and far apart in the stalk, such as the "*Pear Tree*" Tobacco. If he wishes to raise heavy crops to the acre and most of it curing a fine red, he should select such plants as are broad and long leaved, set close together on the stalk with large stems and thick leaf, such as the "*Wilson*" or the "*Broad-leaf Thick-set*," or like kinds. These tobaccos, if ripe, will cure a pretty red and salmon color, and in the sample will be like kid, pliant and glossy, smooth and soft to the touch, if properly managed. After the seed pods have fully developed themselves it should be *pruned*, and then when the pods have turned brown and begin to open, each head should be cut off and hung up to dry under cover until it can be rubbed out; then pass it through a fine sieve so as to get the seed clean, and it requires no further preparation. The seed should be kept perfectly dry. By *pruning*, is meant the lopping off all the small, defective or indifferent pods that are found on the head, leaving only a sufficient number of well formed, large pods to mature, so that the whole strength of the plant may be concentrated in perfecting them alone.

3D AND 4TH.—THE NURSERY AND THE BEST WAY TO INSURE ITS EXISTENCE.

A rich loam is the soil for Tobacco plants. The spot selected for a bed, should be the south-side of a gentle elevation as well protected as possible by woods or shrubbery—a warm spot—mellow ground, perfectly pulverized. After it has been thoroughly burned with bush, dig deep, and continue to dig, rake and chop until every clod, root and stone be removed, then level and pulverize nicely with the rake. When about half prepared, sow over it Guano, at the rate of 600 lbs. to the acre, or *fine* ground bones at the rate of twenty bushels per acre or half the quantity mixed with well rotted stable manure. By the after preparation this becomes well intermixed with the soil. Mix one gill of seed for every ten yards square, with a gallon of dry plaster or dry sifted ashes, to every half pint of seed, and sow it regularly, in the same manner that gardeners sow small seeds, only with a heavier hand. Roll with a hand roller or tramp it with the feet. If the bed be sown early in the season, it ought to be covered with leafless bush, but it is not necessary to cover them after the middle of March, in this climate. Tobacco beds may be sown at any time during winter if the ground be not frozen or too wet. It is safest to sow at intervals, whenever the land is in good order for working—never sow unless the land be in good order, for the work will be thrown away, if the land be too moist, or be not perfectly prepared. The beds must be kept free from grass and weeds, until they are no longer needed, and the grass must be picked out a sprig at a time by the fingers. It is a tedious operation, therefore planters should be very careful not to use any manures on their beds which have grass seeds or weeds in them. After the plants are up, they should receive a top-dressing once every week or ten days, of manure sown broadcast by the hand; this should be a compost composed in the following proportions.

- $\frac{1}{2}$ bushel of unleached ashes,
- 1 bushel of fresh virgin wood's earth,
- 4 lbs. of pulverized sulphur,
- $\frac{1}{2}$ gallon of plaster,

1 quart of salt dissolved in two gallons of liquid manure from the barn-yard—the whole well intermixed. Let a large quantity be prepared in the autumn previous, and put up in barrels, out of the weather, for use when wanted. If possible the plant should stand in the bed from half an inch to one inch apart, and if they are too thick, they may be thinned while *picking* the grass out, or they may be raked out, when they have become generally the size of a five or ten cent piece. The *rake* proper for the purpose should be a small common rake, with iron teeth, very sharp, curved at the points, and three inches long: teeth flat, and three-eighths of an inch wide, and set half an inch apart. The plants that are pulled out by the rake must be taken off the bed, or they will take root again.

5TH AND 6TH.—METHOD OF TRANSPLANTING—PREPARATION OF THE SOIL—DESCRIPTION OF IMPLEMENTS, &c.

The soil best adapted to the growth of Tobacco is a light friable soil, or what is commonly called a sandy loam, not too flat, but rolling, undulating land—not liable to drown in excessive rains. New land is far better than old.

The land intended for Tobacco should be well ploughed early in the spring, taking care to turn the turf completely under, and subsoiling any portion that may be very stiff, or likely to hold water near the surface, and let the land be well harrowed soon after the breaking it up; it should then be kept clean, light and well pulverized, by occasional working with cultivators and large harrows, so as not to disturb the turf beneath the surface. When the plants are of good size for transplanting, and the ground in good order for their reception, the land or so much as can be planted in a "*season*," (*that is, while wet*) should be "*scraped*," which is done by running parallel furrows with a small seeding plow, (the Prouty and Mears' No. 2 $\frac{1}{2}$ for instance) two and a half or three feet apart, then crossing these again at right angles, preserving the same distance, which leaves the ground divided in checks or squares of two and a half or three feet each. The hoes are then put to work and the hill is formed by drawing the two front angles of the square into the hollow or middle, and then smoothed off on top so as to form a broad flat hill about six inches high, then patted with one blow of the hoe to compress the centre of the hill, and cause a slight depression so as to collect the water about the plant. The first fine rain thereafter, the plants should be removed from the seed beds, and one carefully planted in each hill. A brisk man can plant 10,000 plants per day. The smaller or weaker hands, with baskets filled with plants, precede the planters and drop the plants on the hills.

In drawing the plants from the bed, and in carrying them to the ground, great care ought to be taken not to bruise or mash them. They should be put in baskets or barrels, if hauled in carts, so that not many will be in a heap together. The plants should never be planted deeper than when they stood in the bed. Planting is performed by taking the plant dropt on the hill, with the left hand, while the root is straitened with the right, and one finger of the right hand makes a whole in the centre of the hill, and the root of the plant inserted with the left

hand; the dirt is well closed about the roots by pressing the forefinger and thumb of the right hand on each side of the plant, taking care to close the earth well about the bottom of the roots. If sticks be used to plant with, they should be short, and the planter particular not to make the whole too deep. The plants should be very carefully planted, for if the roots be put in bent up, or crooked, the plant may live, but will never flourish, and perhaps when too late to *replant*, it will die, and then all the labor will have been of no avail. In three or four days it may be wed out, that is, the hoes are passed near the plants, and the hard crust formed on the hills pulled away, and the edges of the hills pulled down in the furrows; this is easily done if performed soon after the planting, but if delayed and the ground gets grassy it will be found to be a very troublesome operation. After the weeding out, put a table-spoonful of plaster of Paris, (or a gill of plaster and ashes unleached, well mixed together would be preferable) upon each hill. In a few days—say a week or less time, run a small plow through it, going twice in a row. This is a delicate operation, and requires a steady horse and a skillful plowman, for without great care the plants will be knocked up or killed by the working. The bar of the plow should be run next to the planter. In a week after, the *Tobacco cultivator* or *single shovel*, must be used. Either implement is valuable at this stage of the crops. Once in a row is often enough for the shovel or cultivator to pass.—The crop can now be made with their use, by working the tobacco once a week or ten days, for four or five weeks, going each time across the former working. Any grass growing near the plants should be pulled out by hand. As soon as the tobacco has become too large to work without injuring the leaves by the swingle-tree, the hand hoes should pass through it, drawing earth to the plants where required, and level ridges caused by the cultivator or shovel. Let this hoeing be well done, and the crop wants no more working. Care should be taken to leave the land as level as possible, for level culture is generally best. As soon as it blossoms, or the buds are fairly out, and the seed plants selected, all the rest should be "*topped*" as soon as the blossom is fairly formed. Do not wait for it to bloom, for the horn-blowers will be attracted by the flowers. It should be *topped* down to the leaves that are six inches long, if early in the season, but if late, top still lower. If the season be favorable in two weeks after a plant had been topped, it will be fit for "*cutting*," yet it will not suffer by standing longer in the fields. From this stage of the crop until it is in the house, it is a source of great solicitude to the Planter. He is fearful of storms, frost and worms, his worst enemy—they now come in crowds. The "*suckers*" are to be pulled off and "*ground-leaves*" saved. The "*suckers*" ought to be pulled off as soon as they get two or three inches long; they spring out abundantly from each leaf where it is set on the stalk. "*Ground-leaves*" are those leaves at the bottom of the plant which becomes dry on the stalk, and ought to be gathered early in the morning when they will not crumble.

When it is ripe enough for the house, it is cut off close to the ground by turning up the bottom leaves and striking with a sharp tobacco knife, formed of an old scythe—such as are used for cutting corn, or some persons have knives made, like butchers' cleavers. Let it lay on the ground a short time to "*fall*" or wilt, and then pick it up in shoulder

urns, and carry it to the tobacco house, when it may be put away in three different modes, by "*pegging*," "*spear*ing," and by "*splitting*." "*Pegging*" tobacco is the neatest and best mode, yet the slowest. It is done by driving little pegs, about six inches long, and a half an inch or less square, into the stalk, and these pegs are driven in with a small mallet in a slanting direction, so as to hook on the ticks in the house. It is then put on a "*horse*," which by a rope fixed to one corner, is pulled up in the house by hand, or by block and tackle, and then hung on the sticks, which are regulated to proper distance. A "*tobacco horse*" is nothing more than three small sticks nailed together so as to form a triangle, each side being three or four feet long. "*Spear*ing is the plan I pursue, because it is the quickest plan. A rough block with a hole morticed in it, and a fork inserted a few inches from the hole, for the tobacco stick to rest upon, one end being in the hole, with a spear on the other end of the stick, is all the apparatus required. The plant is then with both hands run over the spear, and thus strung upon the stick—which when full is taken to the house and hung up at once. There are round spears, and dart-spears, like in form to the Indian arrow heads,—hollow of course to admit the sharpened end of the stick.

"*Splitting*" tobacco is admired by many who contend that it makes it cure quicker and brighter, certainly quicker, and less likely to *house burn*, or injure from too thick hanging. The mode is easily pursued by simply splitting the stalk standing in the field, with a knife made for the purpose. The stalk is split from the top to a few inches of the bottom, some days before cutting the tobacco for *house*—care should be taken not to break the leaves while splitting. The knife may be fully described by saying it is a miniature spade. It can be easily made, inserting a part of an old scythe blade in a left oak handle, with its edges bevelled off to the blade, so that it will act as a wedge to the descending knife. After it has been split, cut down and carried to the house, it is straddled on the sticks, which are placed in forks for greater convenience in stringing it on the sticks—and is then hung up in the house—*Tobacco sticks*, are small round sticks, or are split out like laths, one or one and a half inches square, usually larger at one end than the other, and ought to be eight or ten inches longer than the joists of the tobacco house are wide apart. If the tobacco is of good size, six or seven plants are enough on a four foot stick. When first hung up, the sticks should be a foot or fifteen inches apart. As the tobacco cures they may be pushed up closer. After the house is filled and has yellowed, some planters put large fires under it, which dries it at once, increasing its brightness somewhat, but "*firing*" imparts a smoke-smell and taste which is objectionable to buyers. The better plan is to have sufficient house-room and hang it thin in houses not too large, which have windows and doors so as to admit light and dry air, and by closing them in bad weather, exclude hard winds, and be dampness, by which it is materially injured in color and otherwise damaged. After becoming well cured, the stem of the leaf being free from sap, the first mild damp spell of weather, it will become pliant and then may be stripped off the stalk. It is first pulled or taken off the sticks and laid in piles, then the leaves are stripped off and tied in bundles, of about one-fifth or one-sixth of a pound each. The bundle is formed by wrapping a leaf around the head

or upper part of the handful of leaves, for about four inches, and tucking the end of the leaf in the middle of the bundle by way of confining it. There ought, if the quality of the crop will permit, be four sorts of tobacco, "*yellow*," "*bright*," "*dull*," and "*second*." When the tobacco is taken down the "*cutters*" take each plant and pull off the defective, trashy, ground and worm eaten leaves that are next to the big or butt end of the stalk, and then throw the plant to the next person, who strips off all the *bright* leaves (and if there be any yellow leaves, he pulls them off, and lays them aside, until he collects enough to make a bundle) and throws the plant to the next, who takes off all the rest, being the "*dull*," and the respective strippers as they get leaves enough in hand, tie up the bundles and throw them in separate piles for convenience in bulking. The cutters strip nothing but "*seconds*," stripping should never be done in drying or harsh weather, unless the tobacco is bulked up almost as fast as it is stripped. The better plan is to take down no more than you can tie up in a few hours. If the planter chooses he can take down a large quantity and put it in bulk, stalks and all, cover it with tobacco sticks, and it will keep for several days, so that no matter how the weather may be, he can strip out of bulk. However, this is a bad, wasteful way. Tobacco should not be moist or "*high*" as it is termed, when put in the stalk-bulk, for it will get warm, the leaves stick to the stalk, get a bad smell and change color, beside if left too long it will rot. It requires judgment and neatness to bulk tobacco. Two logs should be laid parallel to each other, about thirty inches apart, and the space between them filled with sticks for the purpose of keeping the tobacco free from dampness of the ground. The bundles are then taken one at a time, spread out and smoothed down, which is most conveniently done by putting it against the breast, and stroking the leaves downward smooth, and straight with the right hand. It is then passed two bundles at a time, to the man bulking. He takes them, lays them down and presses them with his hands: they are layed two at a time in a straight line—the broad part of the bundles slightly projecting over the next two, and two rows of bundles are put in a "*bulk*," both rows carried on together, the heads being on the outside, and the tails just lapping one over the other in regular succession.—The bulk when carried up to a convenient height, should have a few sticks layed on the top to keep it in place. It must often be examined, and if getting warm, it ought to be immediately changed and laid down in another bulk of less height, and not pressed as it is laid down: this is called "*wind-rowing*," being loose and open it admits the air between the rows of bundles, hence the term. The next process is to condition it for "*packing*."

(TO BE CONCLUDED IN OUR NEXT.)

USE LIME.—We are surprised that so few farmers use lime as a means of promoting the health of their domestic animals. In hot weather the atmosphere of every stable, piggery, hennery, or other abode of farm animals necessarily becomes tainted with the noxious effluvia generated by the decomposition of animal and vegetable matter. Lime is a great purifier. Use it freely, therefore. Apply it liberally as a whitewash to the oft-cleansed stalls, racks and feed boxes. It will pay better than any investment you can possibly make in drugs. Don't wait another day.

BONES AND SUPERPHOSPHATES OF LIME.

The following we take from an Essay in the Agricultural Report of 1865, on "*Manures and their Application*," by Simon Brown and Joseph Reynolds, M. D., of Concord, Mass. :—

Bones, as we have already said, in their entire state—that is, containing all the gelatine of the periosteum and cells which compose their framework, and all the fat and earths with which these cells are filled—consist of about thirty-eight parts animal matter, forty-four parts of phosphate of lime, three per cent. of magnesia, soda, and other salts, with twelve per cent. of moisture. If a quantity of entire bones ground to a fine powder, are placed in a box or vessel in a warm temperature and slightly moistened, putrefaction will quickly set up and ammonia will be rapidly evolved. It is obvious that in this condition bone must be a highly stimulating and active manure, and must contribute to a vigorous growth of the stalk and an abundant crop of grain and seed. The bone meal and flour now in the market purport to consist of the entire bone reduced to different degrees of fineness. Could we be sure that the glue-makers and soap-makers have not had a share of it, we should consider it the most valuable of all the manufactured manures. As long as we have farm stock, cattle, sheep, swine, and horses, they must have bones, and as phosphate of lime exists so largely in them, it must be provided for them in the food they eat. Accordingly it is present in all cereal grains, in leguminous plants, and many other vegetables, the soil of course furnishing it to them. It is not only, then, the animal substance in bones, the gelatine and fat, that makes them a good manure, but the mineral part is of essential service to some crops, especially if the soil be at all deficient in phosphate of lime. Bones contain, as we have seen forty-four per cent. of phosphate of lime. But phosphate of lime is almost insoluble. We see bones lying exposed to the weather for years, and only slowly crumbling into the soil. The animal matter has long since wasted out of them; but the phosphate of lime remains. How can this be rendered soluble, so that it can speedily yield its valuable elements to the growing plants? Neutral salts consist of acids completely saturated with some base. Thus, sulphate of lime, or gypsum, consists of sulphuric acid combined with all the quicklime it will take up. The new compound thus formed no longer presents the sensible properties of either of the ingredients. The acid of the one and the alkali of the other are not perceptible to the taste, and the caustic property of both is no longer present. The compound, then, is neither acid nor alkaline, but neutral. But many neutral salts, as the gypsum of which we are speaking, are sparingly and slowly soluble in water. By the addition of an excess of the acid used in forming them, they become more soluble. By removing a portion of the base, or alkaline earth, from the compound, the same effect is produced; for if there was just sufficient in the compound to neutralize the acid, the removal of a part leaves the acid unsaturated or in excess. The salt will not then be neutral, but an acid salt, or, in chemical language, a super salt. Phosphate of lime, as found in bones, is a neutral salt, consisting of one part of phosphoric acid and three parts of lime. It may be rendered soluble by adding phosphoric acid, so that it shall no longer be neutral, but an acid or superphosphate; or the same effect may be

produced by the addition of any other acid having a sufficiently strong affinity for lime to take away a portion of it from the phosphoric acid. The remaining lime no longer neutralizes the phosphoric acid, and the compound becomes an acid of superphosphate. Sulphuric acid has so strong an affinity for lime that if it be mixed with neutral phosphate of lime it will seize upon and combine with one of the three parts of lime which, as we have said, enter into its composition, and will form with it sulphate of lime, or gypsum. This mixture of phosphate of lime with sulphuric acid will then consist of superphosphate of lime and plaster, or gypsum. This is the substance known in the market as superphosphate of lime. If no additional plaster or other substance is mixed with it, it is a valuable manurial substance. Could the animal matter contained in the entire bone be separated from it before it is subjected to the action of the sulphuric acid, and be restored to the mixture afterward, a very powerful manure would be obtained. This is said to be done in the manufacture of the superphosphates in the market. But we have found so much difference in the sensible properties and in the effects of different samples of it, that we conclude that the soap-maker at least gets his share, even if the glue-maker is denied, or that the material used in the manufacture consists of bones so long exposed to the action of the weather that the animal matter has been wasted out of them. * * *

Can it be doubted then that superphosphate of lime, judiciously applied to soils fitted for it and needing it, will greatly promote the growth of many of our crops? It is said, however, to be often adulterated with black loam or pulverized muck, which so nearly resembles the burnt bone in color and texture that it is difficult to detect the imposition without the aid of chemical tests.

There are other modes of reducing bones so as to make their properties available by the farmer. One of these is to mix one part of sulphuric acid with two parts of water, and immerse the bones in the mixture until they are softened into a paste, and then mix them with dry muck or some other substance that will separate the adhesive particles and make them convenient for use. * * *

The first requisite in the use of superphosphate is that it be absolutely pure. Numerous cases of failure that have been reported, have undoubtedly arisen from the shameful adulterations, either by the manufacturer or by those who have purchased to sell again. In some instances, however, failures may be traced to total misapplication, as when it is applied to soils so completely charged with cold water that they are rarely warmed to a degree to induce fermentation and the other processes of decay; or again, when it is applied to dry gravelly soil entirely deficient of humus. Superphosphate is not equally adapted to all plants. On all the Brassica family, including the cabbage, Swedish turnip, common flat turnip, cauliflower, brocoli, &c., its influence is usually striking and profitable. The leaves of the plants grow larger and thicker and assume a darker green than we have ever seen them under the stimulus of any other fertilizer. It is also useful to beets, mangolds, peas and beans, and all other of the field and garden crops.

Several years since we made an experiment with it on a young pear orchard containing one hundred and fifty trees. It was applied at the rate of six hundred pounds to the acre, and sowed broadcast in November. The land was a sandy loam, had

been moderately manured for several years in succession, but heavily cropped each year with carrots, parsnips, grapes, and raspberries. In the spring succeeding the dressing with superphosphate, the carrots and parsnips were omitted, and white beans and grapes were planted. All the crops were almost extravagantly luxuriant during the summer. The change in the size and color of the leaves of the pear trees was remarkable, and afforded a striking contrast between themselves and the leaves of other pear trees but a short distance from them. The fruit in the autumn was of corresponding excellence. The beans planted were the white pea bean, which usually grows about a foot high; they also felt the power of the fertilizer, and instead of modestly keeping near the ground, as is their habit, made an average growth of three feet, some of them climbing into the branches of the pear trees, six feet from from the ground. The young grape vines also made a rapid growth, as did the stools of raspberries.—The same spot has been annually dressed in November with farm compost, moderately spaded in.—The pear trees are ten feet apart each way. Between them in the rows is a grape vine and two stools of Brinkle orange raspberries, and beans planted between the rows of pear trees. With such management the crops, crowded as these are, continue at the close of six years to be as luxuriant as ever. During the last autumn the pear trees required propping to enable them to sustain their load of fruit, and the grapes trained to stakes broke their accustomed fastenings and fell to the ground. The beans yielded annually at the rate of about forty bushels to the acre.

Hops—What Varieties to Plant.

An "Old Hop Grower" communicates the following on Hops:

* * As yet very little has been said in regard to the best variety to be cultivated.

From this neglect, nearly all the inexperienced suppose there is but one variety. To such, this is a sad and fatal mistake. There are as many different kinds of hops as of fruit or grapes, and as liable to the attack of diseases. At the present time the hop crop stands No. 1, among the most saleable and best paying products of the country; and as the vermin are making their attacks upon this noble plant, the future success of the grower will depend entirely upon the selection of the variety that is most formidable against the attacks of its enemies.

In many of the oldest hop growing districts experiments have been made on the different varieties, side by side, and results have satisfactorily proven the English Cluster to be far superior in every respect. They are the earliest, rich, hardy, and productive and saleable variety known. The average yield of the English Cluster is from 1,800 to 2,500 pounds per acre, while the average of others is but from 1,000 to 1,400 pounds per acre, and of inferior quality.

I have frequently known whole vineyards of the inferior grades totally destroyed by insects, while the English Cluster stood side by side, without receiving scarcely any perceptible injury!

ROTATION.

"Why is rotation necessary?" This is a frequent inquiry with practical men. Supposing a crop carries off a certain specified amount of inorganic substances from the soil, each of which is indispensable to its development, it follows as a matter of course, that the cultivation of that crop, for several consecutive years, will abstract so far from the supply in the soil, as ultimately to deprive it of the power of producing it. But all crops do not exhaust the soil of the same special substances; and hence if we cultivate Indian corn for a couple of years in succession, on one field, and then potatoes, turnips, peas, beans or carrots, we shall find that the latter are by no means stultified from any lack of nutriment—each finding its appropriate aliment, and in sufficient quantities to insure its healthy growth and maturation. There are many organic substances in the soil which the corn plant does not specially require, or appropriate, and which are consequently not exhausted by its cultivation; while each of them are essential to the growth of some other vegetable. Hence it is that when these are grown alternately, the productive powers of the soil are not so rapidly exhausted, and fertility is kept up by a sort of recuperative process; the organic element necessary for the development of one crop, having time to accumulate while the soil is occupied by another crop by which they are not required.

In many sections of the country the Indian corn crop is one of prime importance, consequently it is frequently cultivated for two, three and even four years in succession, on the same field; but I have observed whenever this practice has been injudiciously adopted, that, after the third season, generally after the second, there is an obvious falling off, even when liberal manuring is adopted. Very few farmers, therefore, who consult their own interests, and who have had the benefit of experience and observation, are found to favor it either in theory or practice.

By adopting a judicious system of rotation, and adhering rigidly to it, with the assistance of copious manuring—returning to the soil more, if possible than the crops carry off—any land may be retained in a condition of high fertility; while, by an opposite course, it will as certainly be exhausted and "run out."

It is a principle with me never to attempt the cultivation of a crop which I cannot afford to manure well, and this should be the policy of every farmer. One had better run in debt for manure than exhaust his soil by cropping without it, or, perhaps, had better suffer his land to rest until manure can be made.—*Germantown Telegraph.*

He that sips of many Arts, drinks of none.

GREEN MANURING AND MANURES.

BY JOHN F. WOLFINGER, MILTON, PA.

OLD GRASSES.

Johnston, of England, in speaking of the effect that growing grasses have upon our soils, says :

"When lands are impoverished you lay them down to grass, and the longer they lie undisturbed the richer in vegetable matter does the soil become. When broken up, you find a black fertile mould where little trace of organic matters had previously existed."

Again, he says :

"Perhaps the most common form of green manuring practiced in this country is that of ploughing up grass lands of various ages. The green matter of the sods serves to manure the after crops and renders the soil capable of yielding a richer return at a small expense of manure artificially added."

And again, he says :

"Hence, one good year of grass or clover will enrich the soil more in proportion to the time expended than a rest of two or three years in grass if annually mowed; or if, instead of being mown, the produce in each case be eaten off by the stock, the result will be the same. That which lies the longest will be the richest when broken up, but not in an equal proportion to the time it has lain. The produce of green parts, as well as of roots, in the artificial grasses, is generally the greatest during the first year after they are sown, and therefore the manuring derived from the droppings of the stock as well as from the roots will be greatest in proportion during the first year. That farming, therefore, is most economical, where the land will admit of it, which permits the clover or grass seeds to occupy the land for one year only."

So Chaptal, a distinguished French agriculturist and agricultural writer, says :

"It is well known to farmers that by ploughing in a crop of grass, or any kind of annual plants, land is put in a state, without other manures, for the production of a crop. In this case, indeed, more is actually given back to the soil than it has itself furnished to the plants, since these latter contain, in addition to the juices which they have absorbed from the earth, the various principles which they have decomposed from the water and the air during the several stages of their growth."

It is evident, therefore, from the above considerations, that poor lands laid down to grass will improve and get richer and richer the longer they are kept in grass, particularly when a large portion of their annual growth is allowed to remain and decay upon the ground where it has grown. After these grasses have occupied the ground for several years or more, they are usually called old grasses, from their age as compared with our young or newly sown grasses. Any kind of grass, so used, will improve the soil. Some grasses, however, will, for self-evident reasons, improve soils far more rapidly and permanently than other grasses will or can.—It would be well for us to know which of our numerous grasses are the best for this purpose. Our most nutritious grasses are, doubtless, also our best manurial grasses. But men of science are not yet agreed as to which of our grasses are the most nutritious. The late Dr. Darlington, of Pennsylvania, considers meadow, or green grass, as the most nutritious of all, for he ranked the eight best grasses in the following order of excellence, to wit : 1st, meadow, or green grass ; 2d, timothy ; 3d, orchard

grass ; 4th, meadow fescue ; 5th, blue grass ; 6th, ray or rye grass ; 7th, red top ; and 8th, sweet-scented vernal grass. But Dr. Muhlenburg, of the same State, and John Taylor, a noted Virginia agriculturist, in their time, considered the tall oat grasses standing at the head of all the grasses for nutritiousness, while Fulton, of Great Britain, puts timothy at the head of all our grasses for nutritiousness, his order of excellence being as follows, viz : 1st, timothy ; 2d, crested dog's tail ; 3d, cock's foot (orchard grass) ; 4th, Italian rye grass ; 5th, smooth stalked meadow grass ; 6th, hard fescue, &c. Thus, we are still greatly in the dark upon this subject, and will remain so until far more extensive as well as accurate scientific experiments have been made upon and with our various grasses than have yet been made. When will our National Department of Agriculture turn its attention to this highly important subject of inquiry, immensely more important to us as a nation than many of the subjects that have so far filled the pages of our national reports on agriculture ?

As our several grasses always succeed best upon some peculiar or particular soil, we should be very careful to sow and grow them on those soils only that are best suited to their nature and wants or vigorous growth. Thus, for example, on *dry* soils we should sow the red and white clover, timothy, orchard grass, tall oat grass, blue grass, smooth-stalked meadow, hard fescue, sheep fescue, and red and purple fescue grasses ; on *wet* soils, timothy and red top ; on *clayey* and *moist* soils, timothy, meadow foxtail, smooth-stalked meadow, rough-stalked meadow, tall oat, tall fescue, and the floating fescue grasses, and blue grass ; on *swampy* and *boggy* soils, the upright bent, white bent or florin, tall oat, meadow fescue, floating fescue, meadow foxtail, and smooth-stalked meadow grasses, as these several grasses do well or best upon these particular soils. The names of many other grasses, both old and new, might be added to this list. Hence, we see that we have grasses suited to every variety of soil, and so have no excuse for letting our fields lie naked or bare in summer, and thus exposed to all the injurious influences of a hot sun, that causes most of the soil's best fertilizing elements to pass away into the air by the process of evaporation.—Therefore, all of our grain-growing fields should always, except when they are covered with grain, have a good coat of clover or of grass, so that whenever we come to plough up a field for the raising of a grain or root crop of any kind, we may have a dense mass of vegetable matter to plough down as a manurial preparation for such grain or root crop. It is just as easy, and even easier, to do this than it is to let our lands lie bare, in open naked fallows, with nothing to shade them from the sun, drying

winds, and heavy washing rains, but the weeds that nature may, through her own unaided efforts, cause to spring up on these fields, and trouble us to get rid of by repeated ploughings and harrowings of the ground. Farm lands, so managed, would always have an abundance of pasturage and of hay, and would never become so poor, exhausted and worn out as they now are under our ruinous, soil-destroying, naked summer fallow system, if it deserves that name. The great advantage of the reform which I have suggested is this, to wit, that we can then apply the most of our barn-yard manure to our meadows and pastures and keep them in a highly productive condition, instead of applying all that manure, as we now do, to our corn, wheat, and other grains, and also root crops. This suggested reform is of infinitely more importance to our country than even our best farmers are aware of, since it will, in connexion with lime, furnish us with the easiest, cheapest and best way yet known of renovating our exhausted and worn-out soils. No man, I am persuaded, need look for any decided or general improvement in our poor farms, until the various grasses, the best grasses that we can procure, are grown upon all our fields in constant and regular abundance, as here recommended. Barn-yard manure will make our meadows, pastures and grass fields produce large crops of excellent pasture and hay for the feeding and fattening of our farm animals, which will, in return, greatly increase the quantity, as well as the quality, of the animal manures, to keep up this fine condition of our meadows, pastures and grass grounds; while the green manurings will, at the same time, make the grain fields yield greatly increased and superior crops of grain and roots of various kinds. Farms so managed can go on producing abundantly, year after year, for a thousand years to come; nay more, as long as the world stands and man cultivates the earth for bread. For proof of this look at Germany, where grounds that have been under the action of the plough for the last two thousand years or more are now, through skilful management, actually producing more produce of all kinds to the acre than they were ever known to do before. What has been done with soils there can also be done with our soils here, for all that we need is a system of farming conformable to nature, and the thing is done successfully.

(CONTINUED IN OUR NEXT.)

REMEDY FOR LICE ON CABBAGE.—A correspondent in the Rural American says there is a remedy for destroying lice on cabbage, as follows:—When the cabbages are about the size of a dining plate, take a half teaspoonful of fine salt and scatter it over each. Repeat about once in ten days, gradually increasing the dose to a tablespoonful if necessary.

MUCK AND SANDY SOILS.

Professor Dana in his excellent treatise on muck, speaking of the value of swamp muck in bringing light sandy soils into a state of the highest fertility, says:

The power of fertility which exists in the silicates of soil is unlimited. An improved agriculture must depend upon the skill with which this power is brought into action. It can be done only by the conjunction of salts, geine, muck and plants. Barren sands are worthless, a peat bog is little better; but a practical illustration of the principles which have been maintained is afforded by a very sandy knoll made fertile by spreading swamp muck upon it. This is giving geine to silicates. The very act of exposure of this swamp muck, has caused an evolution of carbonic acid gas; that decomposes the silicates of potash in the sand; the potash converts the insoluble into soluble manure, and lo! a crop. The growing crop adds its power to the geine. If all the long series of experiments under Von Voght, in Germany, are to be believed, confirmed as they are by repeated trials by our agriculturists, it is not to be doubted, that every inch of every sandy knoll, on every farm, may be changed into a soil in thirteen years, of half that number of inches of good mould.

That cause of fertility is derived from the decomposing power of the geine and plants, is evident from the fact that mere atmospheric exposure of rocks, enriches all soil lying near and around them. It has been thought among the inexplicable mysteries, that the soil under an old stone wall is richer than that a little distance from it. Independent of its roller action, which has compressed the soil and prevented the aerial escape of its geine, consider that the potash washed out of the wall has done this, and the mystery disappears. The agents to hasten this natural production of alkali, are salts and geine. The abundance of these has already been pointed out in peat manure.

Next to this, dry crops plowed in; no matter how scanty, there volume constantly will increase, and can supply the place of swamp muck. Of all soils to be cultivated, or to be restored, none are preferable to the sandy light soils. By their porosity, free access is given to the powerful effects of the air. They are naturally in that state to which trenching, draining, and subsoil plowing are reducing the stiffer lands of England. Manure may as well be thrown into water, as on land underlaid by water. Drain this, and no matter if the upper soil be almost quicksand, manure will convert it into fertile, arable land. The thin covering of mould, scarcely an inch in thickness, the product of a century, may be imitated by studying the laws of its formation. This is the work of "Nature's prentice hand;" man that has long been her journeyman, and now guided by science, the farmer becomes the master workman and may produce in one year quite as much as the apprentice made in seven.

AMONG THE PEACH GROWERS.

From an interesting article by one who has been "among the peach growers" of this latitude, we are indebted to the *Philadelphia Weekly Press*, for the following:—

Location of the Peach Country.

Geographical studies are tedious in hot weather, so we ask only a moment's attention to point out the the great peach-producing section of the United States. Take a pencil and on the map mark a line running from Havre de Grace, Maryland, to New Castle, Delaware. All the land south of that line, on the peninsula formed by the States of Maryland and Delaware, is the peach country. It lies between the Chesapeake and Delaware Bays and the Atlantic Ocean, and embraces nine counties. Its climate is mild, and its soil, while not so sandy as that of New Jersey, is light and highly productive. Of all known fruits, the peach there thrives the best. It must not be understood that the whole of the peninsula is under cultivation. On the contrary, not one-twentieth of it has ever been planted, the farms being scattered amid the forests like chessmen upon the board, at irregular intervals, over a surface which is gently undulating and watered by small streams, which in the language of the country are called "branches."

How the Orchards are Started.

At different points in the hundreds of square miles of the peninsula are "nurserymen," who raise the plants from the peach stones, and when they are two or three feet high dispose of them to the farmers. The selection of good kinds is of the first importance, and as a matter of course the "grafted" fruit is the best. The process of grafting, or "budding," as it is termed, is performed by men who follow it as a regular pursuit, and who in an almost incredibly short space of time will open the bark of a thousand trees and insert in the crevice some carefully selected bud from an adjoining or distant orchard.

The farmers set out the trees at the rate of about 140 to the acre, placing them fifteen or eighteen feet apart. The amount of care which is afterwards bestowed upon them depends upon the energy or ability of the owner. Sometimes the soil is kept soft around the roots by constant ploughing, and sometimes the trees grow up as wild as "Topsy," and prove to be about as valuable. If the proper attention is given, an intelligent farmer will expect a crop of peaches three years after the stone is planted, due allowance being, of course, made for the change in the seasons, some of which are failures, notwithstanding any amount of care bestowed on the cultivation. * * * *

The writer then describes "How the Picking is done"—the means for "Transportation"—manner of "Loading Up"—"Boxes and Baskets"—"Sale of the Orchards"—there being three ways of disposing of the fruit, one is buying the peaches by the box, at the Railroad Stations—one by shipping on consignment to merchants—and another by buying the entire fruit of an orchard at a fixed price for the whole product, the purchaser taking all the risks of the ripening, picking, shipment, &c.

Drying the Fruit.

Allusion has been made to the soft peaches, and those which give indications of rot. As there are

many thousand bushels of these, the waste would be enormous if they were not used. They are consequently dried, either by the old "sun-drying" process, or by means of patent houses erected for the purpose. The process of drying requires constant attention, and is carried on both night and day. Should the peach crop next year be slim, the dried fruit will command an excellent price. * *

Varieties of Peaches.

The principal varieties of peaches grown on the peninsula are the Susquehanna, Old Mixon, Early and Late Crawford, Early and Late York, Troths, Morris Whites, Melocoton, Moore's Favorite, Smock, and Rare Ripe, which also has the alias of "Honest John" and of "Stump the world." In addition to these are scores of others, possessed of fancy names and sundry flavors. The market price depends quite as much on the appearance and condition of the fruit as on the name. * * * *

Canning the Fruit.

At a half-dozen different points on the Delaware Railway line large frame houses have been newly erected for the purpose of canning the fruit. On the first floor of these buildings rows of wooden benches are placed, and the scene during the day within the structure almost baffles description. It must be recollected that in this country all of the work is done by colored people, and on these benches are seated, side by side, whole families, commencing with the grandfather and tapering down to the five-year old specimen, just able to hold a paring knife in her hands. From "early morn to dewy eve" all the fingers in the room are busy in paring and cutting the peaches, and their nimble activity almost equals that of the sewing machine. Conversation in many of these houses is forbidden, but singing is allowed, and so, while the train stopped at a station, the writer of this article enjoyed the novelty of a peach concert. But no human being except a colored resident of Delaware could guess the words of the song, or rather chant, for it was chanted in a low cadence, rising and falling like the music of an æolian harp. Long practice had apparently made the singers perfect in unison. Here are the words:

Put John on dat island,
Put him dar to starve him;
De ravens came and fed him,
On milk and honey.

CHORUS—Oh, we're all gwine home,
Oh, we're all gwine home,
Oh, we're all gwine home.

Who "John" was, or where the island was situated, and whether milk and honey are good for a steady diet, are questions which the curious may find out about the same time that they ascertain who was so extremely cruel as to put the aforesaid John on the hereinbefore mentioned island. We give the same answer that a "parer" gave when he asked the owner's name; "Dunno, mister." Another "parer" of whom we asked exactly the same question, replied, "Thirty-five cents a bushel, mister!"

The peaches in halves are forced into the tin cans by the fingers of colored women; hot sweetening is then poured over them, and they are sealed with three or four motions of the soldering iron in the hands of white timmen. * * * *

A vocalist says he could sing 'Way Down Old Tar River,' if he could only get the *pitch*.

HOME-MADE CONCENTRATED MANURES.

How deplorable is the improvidence, or negligence, or ignorance, call it what you will, of many of our farmers and planters, who give ruinous prices for concentrated manures of doubtful value, while they are surrounded at home with all the materials for making on their own farms, at half the cost, a better article than they can purchase from the manufacturers? We could point to many a homestead in Maryland and Virginia, around which the ashes from the dwelling and quarters have been accumulating for half a century without being turned to account, and yet good farmers at the North are glad to give ten cents per bushel for wood ashes and haul them ten miles. The wonders wrought by Colonel Capron fifteen years ago in the improvement of the poor lands around Laurel factory, between Baltimore and Washington, are due to the application of wood ashes brought from a distance of twenty miles. How rarely is the carcass of any domestic animal converted into manure? and yet a dead horse will make a cord of the best manure, abounding in nitrogen, and fully worth ten dollars. How often, in riding across the country, do we see the skeletons of horses and cattle bleaching in useless decay? And yet, many a farmer gives, or complains he cannot give fifty cents a bushel for bone dust, when he could make it himself at twenty-five, simply by letting the loafers in his vicinity know that he will give half a cent per pound for old bones. We remember seeing on the road between Culpeper Court House and Woodville a huge golgotha accumulated in this way, and the bones, we were told, were dissolved in a weak solution of sulphuric acid and mixed with woods earth, producing a home-made concentrated manure superior to the best Peruvian guano and at half the cost.

The annexed on this subject was communicated to that able journal, the *Southern Cultivator* by a correspondent whose appreciation of that noble old Roman, Governor Wise, cannot exceed our own.

In January, 1866, I wrote to Col. Nat. Tyler, of the *Richmond Inquirer*, respecting the commercial manures to be had in that locality. He handed my letter to Gen. Wise, to whom it made reference in another connection, but who replied to this part of it in this wise. I extract from this letter as a favor to your readers:

"You can't have the concentrated manures sent to you as you propose, at five times their value.—*Make your own manure!* A pit two feet deep, eight by ten square—the bottom made firm and inclining to one corner; at the lower corner place a reservoir, sunk below the corner, to catch the fluid percolating through composts in pit; in that reservoir fix a hand-pump; cover the pit by a roof on posts seven feet

high above ground; then in the bottom of the pit lay muck eight inches thick; then cover the muck with the manure, four inches thick; then muck again eight inches, and then manure four inches; and so on until you reach up four feet high or four and a half, and then top off with muck—*muck at top and bottom*. On the top put a trough or shallow tray, with holes in the bottom; this tray, the same size of your compost heap, say eight feet long, four feet wide, and four and a half feet high—a full cord of more than one hundred and twenty-eight cubic feet. Then dissolve *one bushel* of salt in just water enough to dissolve it. Pour that brine in reservoir; then dissolve three bushels of lime in water to make a *strong milk of lime*. Pour that milk in the brine in the reservoir, and mix them well. Then put your tray on the compost heap, and pump the salt mixture into the tray, and let the mixture percolate through the compost. It will run back into the reservoir, and can be re-pumped say once every two days, and in six days you will have a *cord of manure equal to guano.*"

I shall try this process in the fall season. I know personally that Ex-Governor Wise is one of the best informed and practical men in America. It strikes me however, that the process he describes may be advantageously dispensed with, by making the compost heaps in the open field, and mixing the salt and lime mixture with the muck and manure, as layers are put into the pens, and leaving them well covered, to be used on the ground at planting time. His process is indispensable to making a commercial manure for transportation.

I suggest it is not improbable that the same end, of enriching the soil, might be more advantageously attained by putting the muck and manure in the open furrow at once, pouring the mixture upon it, and covering it up with a turn plow. The whole subject is suggestive, and may prompt practical experiments of value.—*Turf, Field and Farm.*

OLD FOLKS.

Ah, don't be sorrowful, darling,
And don't be sorrowful, pray;
Taking the year together, my dear,
There isn't more night than day.

'Tis rainy weather, my darling,
Time's waves they heavily run;
But taking the year together, my dear,
There isn't more clouds than sun.

We are old folks now, my darling,
Our heads are growing grey;
And taking the year together, my dear,
You will always find the May.

We have had our May, my darling,
And our roses long ago;
And the time of year is coming, my dear,
For the silent night and snow.

And God is God, my darling,
Of night as well as day,
And we feel and know that we can go
Wherever he leads the way.

Aye, God of the night, my darling—
Of the night of death so grim;
The gate that leads out of life, good wife,
Is the gate that leads to Him.

HOW TO DRAIN.

The first kind of drainage was probably that of *open ditches*. This plan has many objections; it occupies land that cannot be used for any other purpose, it necessarily divides the land into small divisions, for such drains to be effective must not be more than thirty feet apart, they are a continual source of trouble from the sides falling in, and during the warm weather of summer the sides, by capillary attraction, draw up the water from the bottom, and thus in a manner destroy the efficiency of the drain. The banks of these ditches form a harbor for weeds and the cost of keeping them clear will pay a good interest on the cost of covered drains. But in the west, where timber is scarce and tiles scarcer, this plan is better than none at all.

Next in order, and practicable where timber is plenty and stone or tile scarce, come *wooden drains*. Good serviceable drains may be made by digging a trench say two and one-half feet wide at the top and sloping to one foot at the bottom and filling it nearly full of brush; the durability of such a drain will depend on the care taken in putting the brush in; to do this properly you should commence at the *upper* end of the ditch and lay the brush at an angle of 45°, with the butts pointing down the ditch, taking care to keep nearly even on top and within about one foot of the surface and allow for from six inches to one foot (according to the size of the brush,) to settle. Such drains will be effective for from five to ten years according to the durability of the wood from which the brush is obtained. The main difficulty to contend with is the constant settling of the soil. Instead of brush, where the proper-sized timber is plenty, logs may be used. To construct a long drain, straight timber of from four to six or seven inches in diameter, should be used; in this case the width of the bottom of the ditch must be governed by the size of the logs which are used. First lay two of the smaller ones in the bottom about three inches apart, and on top of them lay a third and larger one, this leaves an opening three inches wide and of an irregular shape; before filling in with earth a portion of brush, leaves, sods or straw should be thrown in. A slight curve in the logs is not objectionable if three can be found having the same curve; if the timber is large and will admit of it it will be economical to split it. The durability of this drain will of course depend altogether upon the species of wood used; if laid with locust or beech it would last a lifetime. If flat stone are convenient, but not in sufficient quantities to lay the whole drain, they may be substituted for the upper log or slab. Another form of wooden drain may be also made use of where timber is abundant, and may be formed from saw-mill slabs or imperfect boards, scantling, &c. The box in this case may be

of any shape most convenient, but that of an inverted eaves trough will be found the most convenient; the width of the bottom of the ditch must be gauged by the width the box.

Next in order come stone drains, which are made of various shapes and sizes. The most common form is to dig the ditch in the usual manner and fill it to within one and one-half feet of the top with small stones thrown in at random and covered with straw or sods before the earth is thrown on. This is the first style of drain, and will if well done last from ten to twenty years, according to the character of the soil. It will pay to tramp or beat down the first two or three inches thrown in. A better form where flat stones are plenty, is to arrange flat stones in the bottom so as to leave an opening and then fill in with small stones as before. In laying any kind of stone drains, much depends upon the care taken, for if one or two stones become displaced and close the opening it will soon clog up and spoil the drain. The durability of stone drains will much depend upon the manner in which the covering of straw or sod is managed; this straw should be packed tight, and the first two or three inches of earth should be the most solid convenient, and be well rammed or tramped down.—*AGRICOLA, in Germantown Telegraph.*

Wheat will Produce Cheat.

Mr. Pettit, at a late meeting of the Lexington (Ky.) Farmers' Club—says the *Farmers Home Journal*—contended that wheat will produce cheat, under certain circumstances. A number of years ago he sowed rye early in the Fall for the purpose of grazing cattle early in the Spring. He sowed a field in rye with the exception of an acre or an acre and a half, which he sowed in wheat. Next Spring he grazed cattle on it late, and after he had grazed the cattle on it until he thought he had exhausted the benefit of all the grazing, he took the cattle off. On the whole length of the line bordering on the rye the wheat portion was almost all cheat, but none among the rye. He also grazed another piece of wheat that was thin upon the ground, and in walking through the field he found a bunch of wheat and cheat—one small stalk in the center was wheat, and the balance, consisting of about a dozen stalks was all cheat, and upon carefully digging it up, he found that it was all from the same root. Mr. P. also states that a Maryland farmer exhibited to Professor Henry, of the National Institute, a stalk, the head of which was half wheat and the other half cheat.

DRILLING SLACKED LIME WITH WHEAT.—A subscriber asks the Rural New-Yorker, if it will do to drill slacked lime with wheat at the rate of three or four bushels to the acre. We think it will, unless the ground is very dry.

The Difference Between the Soil and the Subsoil.

Beneath the surface soil, in which we place our seed, and which is moved by the passage of the plow, we find what is commonly styled the subsoil, which though most similar to is often very different in composition from the surface soil. Though it does not contain the decayed vegetation which exists in the surface soil, it often contains much fertile matter which if brought to the surface would do much to enrich the surface soil. This is particularly the case when a hard, retentive subsoil underlays a rich, loose one; the lime, iron, magnesia, and saline constituents of the surface soil, having a greater specific gravity than the soil on which they lay or to which they are applied, naturally sink until they find a soil of their own gravity, which if the subsoil is hard and retentive is usually in the upper strata or layer thereof. This is of great and vital importance in subsoiling, for it is evident that in a subsoil of this kind, it would be very bad policy to bring to the surface six or seven inches of the subsoil.

Nor are the saline constituents of the soil all that are found enriching the subsoil, for anything valuable in the upper soil is soluble, and however hard and compact the subsoil may appear to be it is more or less penetrated by water, which takes with it and deposits the fertility of the surface soil. It often happens that the farmer who practices subsoiling will on this account receive more benefit from the first brought to the surface than from any subsequent operation.

The following analysis of the surface soil with its adjoining subsoil from the banks of the Ohio, made by Johnson, will probably best show the difference between the two. They are found to contain of—

	SOIL	SUBSOIL.
Silica,.....	87 143	94 261
Alumina,.....	5 666	1 376
Oxide of iron,.....	2 220	2 236
“manganese,.....	0 360	1 200
Lime,.....	0 564	0 243
Magnesia,.....	0 312	0 310
Potash,.....	0 120	0 110
Soda,.....	0 025	0 130
Phosphoric acid,.....	0 050	trace.
Sulphuric “.....	0 027	0 034
Carbonic “.....	0 080	trace.
Chlorine,.....	0 036	trace.
Humic acid,.....	1 304	trace.
Organic substances,.....	1 011	trace.
Insoluble humus,.....	1 072	trace.

From the observations we can readily see that the effect of subsoil plowing and trenching, will vary with the character of the subsoil; if the latter is hard and compact it will probably arrest the downward passage of the water containing the valuable portions of the surface soil, which upon being again brought to the surface will of course enrich the surface soil; but if on the other hand the subsoil is light and loose, and of a texture not calculated

to retain the saline constituents brought from above, they will pass through it, and when it is turned up it may for a time decrease the crops, for the only benefit gained seem to be that of deepening the surface soil, which even of itself is an important one. This may, in a great measure, account for the varied success which always attends subsoil plowing, and a more careful attention to the difference may be the means of preventing much disappointment, as has been the case with our new correspondent, but old reader.—*Correspondent Ger. Telegraph.*

SUMAC AND SASSAFRAS.—A letter from Orange Court House to the Richmond Dispatch says that the trade in sumac is beginning to attract much attention in that section, and that men, women and children are engaging in it. Many hundred weight find a ready sale in Fredericksburg, where mills are in active operation.

Sassafras also will be largely gathered in Piedmont Virginia next year. Parties desiring to engage in the manufacture of sassafras oil are already making preparation to secure a good supply.

YELLOW IN PEACH TREES.—A writer in the *Gardener's Monthly* says:

In the spring of 1863, I had two or three peach trees that had the yellows very bad. I poured on one gallon of boiling hot water on each tree, and let it run down the trunk. The result was surprising. In the course of two or three weeks there appeared a new growth of leaves, fresh and green, and this season they have all had peaches on them.

RECEIVED.

From George Perry & Son, Georgetown, Connecticut, their Trade List for fall of 1867, consisting of small fruits of all kinds.

From H. H. Doolittle, Oaks Corner, New York, his “Twelve Years Experience in Black Raspberry Culture,” a very complete manual of 22 pages, with illustrations. It treats of the Doolittle Raspberry, the Seneca Black Cap, and the Garden Raspberry. Price 20 cents, postpaid.

From Robert Halliday & Son, Baltimore, Trade List of Camellias, Azalæas, Roses, &c., for the Fall of 1867.

AG—An Agricultural and Mechanical Association was organized in July last, in Independence county, Ark., by the election of the following officers:—Hon. Wm. Byers, president; W. W. Gleen, vice-president; John Campbell, recording secretary; Dr. M. McClure, cor. secretary; B. E. Burns, treasurer. Stock was subscribed to the amount of \$525 by those present.

It was a Dutchman who said his pig had no earmarks except a short tail; and it was a British magistrate who, being told by a vagabond that he was not married, responded: “That’s a good thing for your wife.”

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Maryland Agricultural and Mechanical Association.

The annual meeting for the selection of officers of the Maryland State Agricultural and Mechanical Association will be held at the office of the Society, 69 West Fayette street, on Thursday, October 31st, at 8 o'clock P. M. By order of
Wm. DEVRIES, President.
B. H. WARING, General Secretary.

Fifteen Numbers for \$1.50.

With a view of inducing new subscriptions to our "Farmer" for 1868, we offer to all subscribers sent in this month the three months of 1867—October, November and December—making fifteen numbers for \$1.50. Our friends can serve us by calling the attention of their neighbors to this liberal offer.—Any one sending us five names and \$7.50 will be entitled to an extra copy.

To Our Friends Everywhere.

Will our friends oblige us by presenting the claims of the "Maryland Farmer" to their neighbors? Thousands of farmers and residents of the suburbs of cities and villages, who are not now taking any journal devoted to agriculture and rural affairs, could be easily induced to subscribe, if the character of the paper was made known to them. A very little effort in almost any neighborhood, would secure a good list, or at any rate, an extra copy.

CAMPAIGN OF 1868! SPLENDID COMBINATION!

Two First-Class Rural Journals for \$3.50!

THE MARYLAND FARMER,
(A Standard Monthly.)

AND
MOORE'S RURAL NEW YORKER,
(The Leading Agricultural, Literary and Family Weekly.)

It will be seen by an advertisement in another column, that we have entered into an arrangement whereby we can furnish the MARYLAND FARMER and the RURAL NEW YORKER one year for \$3.50—by far the most liberal offer ever made the Rural public.

The RURAL is the best Weekly Journal of its class in the world—has the largest circulation—is ably edited—best illustrated—has a complete corps of contributors, and adapted to all classes of Rural Readers, the truth of which is verified by its extended circulation, now reaching 75,000. The reduced rates for the two puts it in the power of all our people, whose pecuniary need has prevented them from indulging in so great a necessity, to now possess themselves of the *Best Weekly*, Agricultural, Literary and Family paper in the country—and an agricultural *Monthly* that ranks high among the Standard Magazines of the day. This liberal reduction is made, at this time, to meet the wants of a large class who believe a few dollars invested in good papers is a profitable investment both for the farmer and the household.

Subscription to the RURAL alone \$3 per year—to the FARMER, \$1.50—both for \$3.50.

THREE FOR \$5.

The "Rural New-Yorker" \$3—The "Southern Cultivator" \$2, and the "Maryland Farmer" \$1.50 per year, will be furnished at \$5 for the three. Thus for \$5 can be secured one first-class weekly and two standard agricultural monthlies. Subscriptions can commence at any time.

OUR COMBINATION!

A subscriber at Pendleton, S. C., writing on business thus speaks of our combination with the *Rural New Yorker* and *Southern Cultivator*. The *Maryland Farmer* and *Rural New Yorker*, both one year for \$3.50—*Farmer* and *Cultivator*, one year, \$3—the three for \$5. Try them for one year.

"I acknowledge the regular receipt of "Maryland Farmer," "Rural New Yorker," and "Southern Cultivator," and I must, at least, own that my satisfaction, even up to this time, in reading the various articles on rural economy, has amply repaid me for the small sum of money expended. You may rest assured that I will, for the future, warmly recommend subscriptions to your *Farmer*, et als."

Fair of the Rockbridge Agricultural and Mechanical Society.

Our friends in Virginia are aroused to the importance of Agricultural and Mechanical Associations and Fairs, regarding them as potent instruments in the advancement of these great interests, and for the development of their resources. We congratulate them upon the energy and zeal displayed in perfecting these organizations, which we conceive are eminently calculated to lead to great results. The new order of things in Virginia and other Southern States make it necessary for the agricultural and mechanical interests to take prompt and efficient steps for the promotion of agriculture and mechanic arts.

Among the many Fairs to be held in Virginia this fall is the "Rockbridge Agricultural and Mechanical Association," which takes place on the 24th, 25th and 26th of October, at Lexington, which already promises to be a great success, as its projectors are now energetically at work in securing articles in every department of industry for show and competition.

We would call the attention of our manufacturers and others to this exhibition, and urge them to forward articles and thereby promote their own interest and aid in the success of the enterprise. The people of this section are greatly in need of labor-saving implements and machinery, and this will afford them an opportunity to make a judicious selection of such things as they may need. We especially call upon our agricultural implement and machine manufacturers, not only of Baltimore, but farther North, to forward contributions. Every arrangement has been made by the officers of the Association for the reception, arrangement and care of articles sent for display.

We beg leave in this public manner to gratefully acknowledge the distinguished honor conferred upon us by our friends of the Rockbridge Society in bestowing upon us an honorary membership in their Association, and gladly accept it as an evidence of their appreciation of our humble efforts in the cause of agriculture and its kindred sciences.

We cannot resist the opportunity here offered to acknowledge the many obligations we are under for the very liberal and cordial support extended to our "Farmer" by a host of Virginia planters and farmers, and shall endeavor to so conduct it in the future as to commend it to their continued support.

Our friends will pardon the vanity that prompts us to subjoin the very kind and flattering letter of Jacob Fuller, Esq., President of the Association, announcing our honorary election:

LEXINGTON, Va., September 17, 1867.

S. SANDS MILLS, Esq., Editor *Maryland Farmer*.

Dear Sir:—As a well merited compliment to the very valuable service rendered to the cause of agriculture, &c., in the States of Maryland and Virginia, through the columns of your excellent journal, I have the agreeable duty imposed upon me of constituting you an Honorary Member of the Rockbridge Agricultural and Mechanical Society. This I do in the name and by the authority of the Executive Committee. I hope it will be your pleasure to accept this honor, not for any intrinsic worth in itself, but merely as an evidence that you reciprocate the *spirit* in which it is offered.

It will be our pleasure to co-operate with you in every way in extending the circulation of your journal, as one of the means of elevating the aspirations of our people, stimulating their zeal and energy and securing to them marked

improvement in the various arts, to the maintenance of which you are devoting yourself.

Let me assure you of the personal gratification it would afford the officers of our Society to have it in their power to welcome you to the hospitalities of our town, during our Fair, to be held 23d, 24th and 25th October next.

In making this communication, as I do, hurriedly, I crave your indulgent construction of matter and manner, and hope you will accept, for continued and increasing success, the best wishes of

Your obedient servant,

JACOB FULLER,
President R. A. and M. Society.

THE BORDER AGRICULTURAL SOCIETY.

This newly organized Society will hold a Fair, at Danville, Va., commencing on Tuesday, 5th November next, at which will be exhibited the most approved Agricultural Implements and Machinery, as well as the latest improvements in other departments of the Mechanic Arts, the finest Stock and the best production of the farm, together with specimens of the handiwork of the women. Our manufacturers, breeders and others, are invited to forward articles for exhibition and for the premiums which are to be offered, and which are on a very liberal scale.

In this connection we cannot resist the temptation to extract the following from a very able and spirited appeal issued by the Executive Committee of the Society, and written by Maj. W. T. Sutherland, president. After speaking of the many difficulties surrounding the people of that section, and the agitation of the question as to whether the people shall abandon their lands, and seek new homes in a strange land, he says:—

"We will, however, suggest a few practical thoughts in this connection. To what section of country should we go? The same God ruleth everywhere. Here we have a soil unsurpassed in fertility, and in the variety of its productions—a climate unequalled, the year round, by any of which we have knowledge; with pure water gushing from every hill, and a people of acknowledged intelligence and hospitality. Here, too, lie the bones of our departed loved ones. Shall we give up all these, to go, we know not where, in search of that we may never find? Let us rather forget the past, make the best of the present, dismiss evil forebodings, catch fresh inspiration from the hope of better times to come, and *start afresh here, in our own native land.*

Let us unite with others more hopeful, and make an earnest and continued effort to improve everything around us; to attract immigrants who shall occupy and cultivate our waste lands, that thus we may be enabled to live comfortably, and to provide for the future wants of ourselves and those depending on us.

We invite you, then, to become members of our Society, that you may aid us by your counsel and your example, in introducing new ideas in the management of our farms, and new and improved implements in the cultivation of our soil.

Let us abandon the unprofitable and corrupting study of politics, and devote our leisure hours to the reading of agricultural journal. We may thus become well informed and successful farmers.

In this view of the subject, is it just to ourselves and our posterity, that we should fold our arms and spend our lives in lamentations over the past, or drag out a miserable existence in contemplating a hopeless future?

We say *no*, emphatically *no*. We should, like men, rise above the difficulties that now impede our progress, and demonstrate to the world that if we cannot *command*, we can do more, we *can deserve success.*"

Cultivation of Tobacco in Louisiana.

A correspondent writing us from Baton Rouge, La., on the subject of Tobacco culture, thus speaks of his experience. We refer him to the Essay published in this number written by W. W. W. Bowie, Esq., of Maryland, one of our experienced Tobacco growers.

"I desire to study up the Tobacco question, and if the results of the information obtained hold out the least encouragement, I will cheerfully contribute both effort and example in rebelling against the despotism of 'King Cotton.' The Tobacco raised in this State, particularly between here and New Orleans, on the 'coast' of the Mississippi—manufactured by the farmers who raise it at home—sells readily at \$1.50 per pound. Such is the celebrated 'Perige' tobacco, used entirely for pipe smoking.

I am trying its culture on three acres. So far, my experiment justifies preparations for a more extended crops. Yet the results of this experiment are too crude and partial to establish the assurance of a reliable repetition. The enlightenment desirable from the precepts and practices of the tobacco growers of the older States, cannot fail to second a hopeful prosecution of the business or peremptorily interdict it at once and for good.

I can send you a pound of Bayard Taylor's Latakia Tobacco seed. My experience would pronounce it a nondescript,—but I will try it again next year, with more carefulness, and let you hear of its right to compete with the "weed" of the West. Please send me specimen of 'Moore's Rural New Yorker,' which you offer for one year with "Maryland Farmer," for \$3.50."

Maryland Attractions for Emigrants.

At a recent meeting of the American Institute Farmers' Club, in New York, Prof. Higgins, the Maryland State Immigrant Agent, took part in the discussions, and in the Tribune's report his remarks are thus noticed :

Prof. Higgins, State Immigrant Agent of Maryland, delivered an interesting address on the advantages this State possesses for industrious men and capitalists seeking homes. The climate is the most delightful in our country, land is cheap, and the large proprietors are willing to sell. With many it is not a question, for they are in debt and they are obliged to sell. Northern people are treated courteously, and sometimes better than they deserve.—Farms, with good improvements, can be had for \$20 to \$30 and \$40 an acre. There are various marls which add to the natural fertility of the soil. Dr. Snodgrass spoke of Maryland, from personal observation, as having many advantages.

EUROPEAN countries grow quite as many potatoes as America. France has this year 2,040,364 acres planted with them, and Austria 1,308,148 acres. Ireland, the great potato country, reports 1,050,419 acres. In Bavaria there are 649,735 acres; in Great Britain, 498,843 acres; in Belgium, 369,850 acres; in Sweden 334,000 acres; in Holland, 265,987 acres; in Wurtemberg, 167,948 acres; and in Denmark proper, 69,176 acres.

Washington County Agricultural and Mechanical Association Fair.

We are gratified to learn, through the *Herald and Torch*, that the Agricultural and Mechanical Association of Washington county has determined to hold its Fair on the ground of Richard Wise, Esq., a short distance west of Hagerstown, and that the time fixed is the 15th, 16th, 17th and 18th of October. The premium list is an unusually liberal one, and we advise our country friends, as well as others who may be disposed to take an interest in these commendable exhibitions, to make preparations at once to compete with each other for the numerous prizes that will be offered.

For a number of years this Association held fairs on its old grounds, which were a credit to its management and an honor to the county, and of which many of our readers, no doubt, have very pleasant memories. Its last one was held in 1860, after which the war intervened, and turned the attention of every body from these annual manifestations of peace and plenty, union and harmony, to the booming of cannon and the tramp of soldiery. This being now also over, let us hope forever, we can return with renewed pleasure to those of our old customs that are as useful and as full of innocent pleasures as Agricultural Fairs.

THE POTATO BUG.

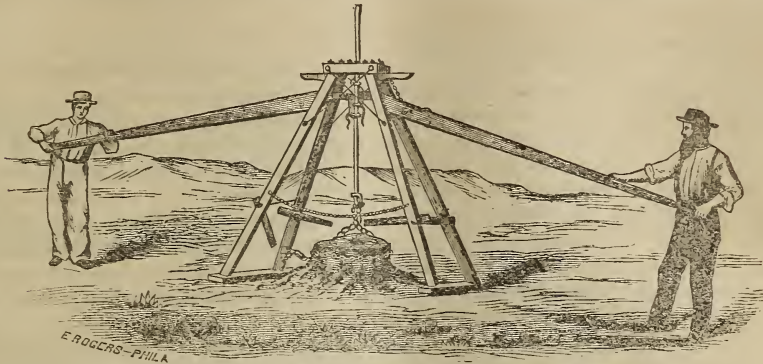
DENTON, *Caroline Co., Md.*, Sept. 16th, 1867.

To the Editors *Maryland Farmer* :

A friend in whom I have implicit confidence informed me the other day, that he effectually cleared his potato patch of all bugs by gently whipping them once with the branches of the Elder—and he further states that several of his neighbours had cleared their potatoes by the same process. If you think this worth publishing you are at liberty to do so. Your friends can test it for themselves, at the proper season. Yours, W. A. WILLIAMS.

THISTLES.—Canada or other species may be most certainly eradicated and destroyed when ready to flower, by putting on a pair of leather gloves or mittens and pulling them up: the pull must be slow, steady and strait, so as to draw as much of the root as possible: lay them in heaps, or plough them in, for they will readily decompose and furnish plant food. Deep ploughing and thorough tillage will soon clean land invested with these pests, as it will of the ox-eye daisy, which ornaments too many movings in the early part of the season in Eastern Massachusetts. Thorough tillage not only destroys weeds, but is also an almost sure guaranty for good crops. Such husbandmen get good crops every season, whether wet or dry.—*Ex.*

PRESSEY'S STUMP PULLER AND ROCK LIFTER.



PRESSEY'S STUMP PULLER.

The above cut represents Pressey's Stump Puller and Rock Lifter, which has been endorsed by a number of New Jersey farmers and others. The editor of the *Hammonton Culturist*, who recently witnessed one of these machines in operation, says:

"This machine is not merely portable, but very powerful. Two men, with the aid of the levers, exert a lifting power equal to 40,000 pounds. Very few stumps in New Jersey will resist this tremendous force. During the past month one of Mr. Pressey's machines was tried on the heavy oak stumps at East Fruitland, and with most signal success. With it, at least one hundred large stumps may be taken out in a day by two men. As the stumps are taken out whole—small roots as well as large—the advantages of pulling instead of grubbing them is very decided. The ground is left ready for the plow, and subsequent cultivation is not interfered with by the small roots usually left after grubbing. We saw pine stumps taken out with this machine which had tap roots fully eight feet long."

This machine weighs 225 pounds, being easily moved by two men from one stump to another, and is sold at \$60. Address George W. Pressey, Hammonton, New Jersey.

LONG YEARS AGO.

All for a pretty girlish face,
Two cheeks of rosy hue,
Two laughing lips of vermeil tint,
And eyes of heaven's blue.

All for a little dimple chin,
A round throat snowy fair,
A darling mouth to dream upon
A glorious golden hair,

All for a tender cooing voice,
And gentle fluttering sighs;
All for the promise made to me
By story-telling eyes.

All for that pretty girlish face,
For a hand as white as snow,
I dreamed a foolish dream of love
Long, long years ago.

WITHEVILLE, VA., August 26th, 1867.

To the Editors of *Maryland Farmer*:

Will you give place to the following in the columns of the forthcoming number of your valuable, practical farm journal, which I find has many readers among us. I believe by so doing you will benefit many of your subscribers in the South whose situations are similar to my own.

I was recently induced to call to my assistance your correspondent, Mr. J. Wilkinson, Civil Engineer, Landscape Gardener, &c., of Baltimore, whose articles which have appeared in your journal from time to time, I had read with great interest and advantage.

I desired to have his counsel and assistance relative to a great variety of interests, but especially in the architectural branch of his profession. I found him thoroughly practical and au fait in every branch of his comprehensive profession.

I have an expensive dairy, which was designed to be complete in its details, but experience had proven that it was defective, the cause of which I had not been able to discover, but Mr. Wilkinson pointed out the cause of its inefficiency at once, and practically illustrated to me on the spot the defects in its structure, and convinced me that with a very simple and inexpensive arrangement the greatest defect would be thoroughly remedied. He spent some days with me, and I consulted him on a great variety of subjects, in each and all he seemed ready for every emergency, and proceeded without hesitation to sketch plans for and give practical, common-sense reasons in every case as to what should be done and how it could be accomplished at the least cost. I was very forcibly struck with the thorough economy of all his suggestions. Feeling that such talent and experience would be invaluable to me and others in this region, I endeavored to hold out inducements for him to come and settle among us, where we might avail ourselves daily of the advantages of his superior intelligence and thorough practical skill in improved husbandry particularly, in which I believe that he possesses a more thorough knowledge than any other gentleman with whom I have met for many a day. I therefore confidently recommend him, feeling assured that any one who may employ him in any branch of his profession will find it greatly to their interest and satisfaction.

I hope he will continue to advertise through your journal, and occasionally favor your readers with an article as heretofore. Yours, J. F. KENT.

Horticultural.

SPRING AND FALL PLANTING OF TREES.

The relative advantages of spring and fall planting have given rise to many opinions, and it is not strange that a wide difference in opinion should be held on the question, since so much of success or failure depends upon the season, locality, and other attendant circumstances. The influencing agents of vegetation are subject to such a vast variety of modifications, which can neither be foreseen nor prevented, that no isolated observation, however truthfully noted, will suffice as a guide in establishing definite rules; and it may be remarked that the many seemingly conflicting opinions upon certain points of practice could, in most instances, be reconciled if all the attending facts and circumstances were clearly produced, but these items are difficult to obtain.

Perhaps the strongest argument in favor of fall planting is the particularly favorable peculiarities in the relative conditions of the soil and the atmosphere at that season. Independent of this, it is theoretically true that autumn is the best time for removing trees. A plant that has occupied its position for several years cannot be removed without curtailing and injuring its roots more or less, but there are certain portions of the year when the roots are of minimum importance to the plant. It is very evident that they are most essential when the tree is in full foliage and vigorous growth, and during this period any reduction of roots would be speedily perceptible; on the other hand, when the seasonal growth is completed, and the plant defoliated, the offices of the roots are less important. From the above we learn that the best time to transplant is between the fall of the leaves in autumn and the bursting of the buds into growth in spring, or during what is termed the dormant season.

The "particularly favorable conditions of the soil and air" may now be noted. During the month of October the soil averages ten degrees warmer than the atmosphere. This forms a species of natural hot-bed into which we place a newly removed tree, the formation of young roots is encouraged, and before many weeks elapse the plant is well established, and enabled to withstand the vicissitudes of winter and make an early and vigorous start in the following spring. The low atmospheric temperature prevents any growth in the branches, which is so far favorable under the circumstances.

In spring we find these physical conditions reversed; the soil is then cold, and accumulates heat slowly while the air rapidly increases in warmth; the buds are excited to growth, new leaves are formed in advance of the roots, each leaf acts as a pump

extracting sap from the branches and trunk of the tree, which as yet has no active roots to supply the demand; and if evaporation is severe and continued, the plant must either succumb or receive such a check as will require the whole season to recover. Hence it may frequently be observed that spring-planted trees will show a profusion of leaves apparently vigorous and healthy, but suddenly wither and decay under the influence of clear, dry and warm weather.

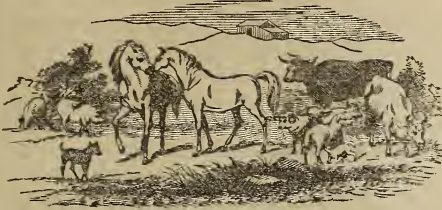
These so far show great advantages in favor of fall planting, but there are other considerations to be canvassed before deciding the question. It is very clear that unless planting is performed within a certain period the advantage of immediate root-growth will not be secured; if delayed beyond the first week in November, success will be less certain. The best period is undoubtedly as soon as the leaves change color, stripping off the foliage before removal.

The character of the soil and location will also materially influence success. In undrained clayey soils the trees may not get sufficient root-hold to enable them to resist the throwing-out tendency of alternate freezing and thawing, or the young spongioses may be destroyed by constant saturation. Again, in very bleak and exposed localities, the drying winds of spring may exhaust the juices faster than the young roots can supply the demands of evaporation. Of course, the very evident precaution of securing the plant from swaying should be attended to, otherwise many of the young rootlets will be twisted off. Staking may have to be necessary where the trees are tall, but it is much preferable to stay them with a slight mound of soil over the roots, which can be removed when of no further use. It will, also, be of great benefit if the frost can be kept from penetrating to the roots. A covering of loose material will be a protection—a wise precaution even on well-established trees.

In northern latitudes, where the winters commence early and continue long and severe, fall planting will not so generally be successful, as in more temperate regions, except in particularly favorable localities. Early spring planting, taking the precaution to prune the branches, so as to restore the balance destroyed by the root mutilation inseparable from removals, and mulching over the roots, so as to retain moisture during summer, will be the most likely auxiliaries towards success.

Evergreens can, in all cases, be most successfully transplanted just as growth commences. When the young shoots exhibit symptoms of pushing, they can be removed without risk of failure with ordinary care. They may also be removed in August and September, so that they can have a good season to furnish new roots before winter. Early spring removal of such trees is not so advisable, as they have a large evaporating surface, which, when subjected to drying spring winds, require a constant action of root to maintain life.—*William Saunders.*

Live Stock Register.



CARE OF STOCK.

The principal object of interest to most farmers in winter is their stock. Then, when the earth ceases to produce, the horse and cow and poultry are all of daily value, and continue to yield profits. The great secret of increasing this productiveness is not only to take good care of them, but to learn how to do it. Much of this is in *treating* the animals to that *variety* which is as agreeable to them as to man. Thus, a horse, as the *Rural World* suggests, will get tired of standing and treading on a hard floor; so will a cow, a sheep, a man. A soft bed feels easy—gives rest; and yet we neglect the bedding of our stables to a great extent. Injured limbs and other ailments, especially of the hoof, are the result often of a neglect here, as has been clearly enough shown, and as any man can clearly enough see, if he gives the subject a moment's thought. Bed with straw, which is plenty, or saw-dust, or tan-bark or shavings. The dryer these materials are the better.—Every day remove the moistened bedding and replace with new. Such a floor, well bedded, adds greatly to the warmth of a stable, and thus becomes a fodder saver. The small holes and crevices in a floor with a good bedding upon them, will let little or no cold through, and will drain the floor.—Rather have a ground-floor than hard, naked plank. The same is true for cows in milk, of whom another writer says that a frequent change of food is important at this season of the year. There is a great advantage in this change, for if one description of food is constantly used, the cows tire of it, eat it less greedily, and soon show a reduction of produce. The very novelty of change seems to whet the appetite and to stimulate the vitality of the whole system, and, of course, to promote the secretions.—Those near large towns can get a few brewer's grains, feed out some roots and an occasional breakfast of shorts will be found to pay. Cabbage ought to be raised more extensively as a fodder crop.—They are most excellent, and the yield is enormous. Study change and feed regularly. A correspondent of the *Prairie Farmer*, who keeps a dairy, *knows* it to be a fact that if his cows were not salted as often as every fourth day, they would fall off in their milk from a pint to a quart per day.

MUTTON SHEEP UPON DAIRY FARMS.

Some of our dairy farmers are discussing the question of keeping sheep in connection with the dairy. The first question usually asked is—"What is the most profitable sheep for me to keep?" The answer to this question must be determined in a great measure by the soil, climate and market where the farmer is located. The sheep husbandry that may be most profitable in Texas may not be equally so in New York. In a thickly populated country where land is expensive, and at the present prices of wool, we must look beyond mere wool production to make sheep husbandry pay. There may be local causes affecting single farms that have their influence in determining what kind of sheep to employ.

Rough, hilly farms, with but little arable land in proportion to the pasture will be better adapted to a small, hardy race of sheep, while farms that have better pastures and higher culture can maintain a larger meat producing breed. In the central counties of New York, there is, and always will be, a good market for mutton, and there is nothing in the way of our producing good wool and good mutton, since our soil and climate seem well adapted to the usual breeds of sheep. Of the different breeds of English sheep, the Lincolns, the Cotswolds, the Leicester and the Downs, each has its advocates, and each combines those qualities which render them profitable, both for meat and wool. But if the farmer proposes to grow meat and wool for the market, it is not imperative in making his selection, that he should strictly adhere to pure bred animals, in order to have a good flock. In making up a flock, if good size sheep be selected, having good constitutions and heavy fleeces, and then breeding from them, using a pure bred male of either the breeds named, that he wishes his flock assimilated to, there is little danger of failing in good results. This course we found pursued often in England, the inferior sheep of the flock being sold for mutton, and by adhering to the system for a few years, a flock of great excellence, both as to wool and meat, is obtained.—There can be but little doubt that a large number of mutton sheep is needed in the dairy districts of New York, and with such a good market for mutton as is presented in the central counties of the State, it is pretty certain that small flocks of English sheep upon dairy farms may be made remunerative. The experiment is well worth trying, and we are glad to see some of our best farmers agitating the question at this time.—X. A. WILLARD, in *Utica Herald*.

EYRE & LANDELL, 4th and Arch streets, Philadelphia, are now offering a large stock of Fall Goods to purchasers. This is an old established and reliable dry-goods House.—Read advertisement.

Effects of Rusty Straw on the Health of Animals.

The condition of straw known as "rust," "red-rag," "red-gum," etc., is caused by a fungus called *Uredo Rubego*, which form yellowish-brown oval spots and blotches upon the leaf, stem, and chaff. Spring wheat is less liable to be attacked than winter wheat, and heavy soil is less subject to it than light ones.

Speaking medically, smut, mildew, blight, etc., may be considered as exanthematous diseases of plants, caused by the spores of fungi entering the stomata of plants.

Several experiments have been instituted by veterinary surgeons to prove that diseased or rusty straw is very injurious—a decoction of rusty straw, (if administered), causes loss of appetite—the animal becoming thin and sickly. Rust and mildew in plants have been accused of causing many epigastric diseases,—as the great loss of sheep in Franconia—and of a contagious malady affecting cattle, and even the silk-worm, in Padua,—also of the plagues which raged in Hesse, Hungary and Saxony, were recognized as the result of rust and mildew affecting plants, etc., after the country had been inundated. Gerlach has known mildew and rust to give rise to abortion and inflammation of the womb in ewes.

The class of diseases produced by feeding upon rusty straw, are of those usually seen among animals that are poorly fed and nourished, viz : marasmus, glanders, farcy, skin diseases, catarrhal affections, and watery swellings of the body and legs.

During eight months, and out of seven hundred horses fed upon rusty straw, there were constantly from 45 to 50 on the sick-list; and, in the month of November, there were as many as 62 cases resulting from the same cause. Such, then, is but a synopsis of a record that ought to open the eyes of farmers and others to a proper use of rusty straw.—*B. McClure, in Practical Farmer.*

BOILED PEAS.

"Boiled peas," says a correspondent of the *Richmond Farmer*, "as food for milch cows, and for fattening hogs is far superior to corn, meal, or anything else I have ever seen tried. My honest opinion is that, two bushels of peas are superior to, or worth more to fatten hogs, or to increase the milk of cows, than three bushels of corn applied to the same objects. In experimenting, I have found that hogs, not only fattened doubly as fast, but that the improvement of their general condition was in like proportion." "With respect to cows," he says—"the effect was, in ten days, to double the yield of milk. My plan in using them was, to soak them in water, twelve hours or through the night, before boiling them. By this process, their bulk was doubled, and consequently they required less boiling."

USEFUL RECIPES.

CURE FOR SCRATCHES IN HORSES.—Take French brandy $\frac{1}{2}$ pint, spirits of turpentine, 4 table-spoons full, castile soap $\frac{1}{4}$ of a pound, shave the soap fine and mix all the ingredients well together in a bottle and apply it twice a day, washing the leg clean each time with soap and warm water before applying.

SPRINGHALT IN HORSES.—This peculiar spasmodic affection of the muscles of the hind legs is termed Springhalt. It is an affection over which the veterinary surgeon, armed with the whole *materia medica*, has but very little power, and in chronic cases of long standing all hopes of a permanent recovery must be abandoned; we would, however, recommend that the spine be rubbed daily with the following embrocation, calculated to restore nervous energy: Linseed oil 1 pint, spirits of hartshorn 2 ounces, fine mustard $\frac{1}{2}$ ounce; also, give the following medicine: Powdered goldenseal, gentian, cream of tartar, charcoal, of each 1 ounce, assafoetida $\frac{1}{4}$ ounce, mix, divide into eight parts—one to be given morning and evening mixed with the food.

LOOSE BOWELS IN HORSES.—In all cases of chronic diarrhoea we have found putting powdered charcoal in the feed a very good remedy and if the disease depends on a deranged digestive function, the liver included, give a few doses of the following: Powdered goldenseal 2 ounces, ginger 1 ounce, salt 1 ounce. Dose, half an ounce twice a day.

TO REMOVE SCUM IN HORSES EYES.—Take finely powdered burnt alum and blow it into the eye with a goose quill, it will remove all the scum and restore the clearness of the eye.

SPRAIN IN HORSES.—Our general advice is, during the inflammatory stage, let the animal have rest, and apply the following lotion to the parts daily with a sponge: Take muriatic acid 4 ounces, water 2 quarts, tincture of blood-root 6 ounces—mix. By a faithful application of the above, the inflammatory symptoms will soon subside, ancholosis progresses in a slow, yet favorable manner, without the usual pain and irritation attendant on the firing process, we have cured more horses by this mild treatment than by the more barbarous mode of fire and blister.

TO CURE MULES SPRAINED IN STIFLE JOINTS.—The only cure for mules sprained in the stifle joint is applications of cold water fomentations of water with infusion of poppy heads. For chronic stifle lameness, a few applications of the acetate of cantharides will probably effect a cure, in either case the animal should have perfect rest.

WORMS IN HORSES.—N. H. Paaren, V. S., recommends the following, in the *Prairie Farmer*: Support the strength by good generous feeding, and give iron, gentian, arsenious acid in the following manner: Powdered sulphate of iron, 2 drachms, gentian root, two drachms, arsenic, five grains. Mix, and give one such dose in mixed, cut, or soft feed, twice or three times a week.—*Stock Journal.*

CURE FOR BARN ITCH.—A correspondent in *Dummers-ton* informs us that one table-spoonful of flour of sulphur given in meal once a day for one week, will cure the itch in cattle. Try it.

COPPERAS FOR TRICHINA.—The Commissioner of Agriculture has "no doubt of the efficacy of copperas mixed with the salt given to hogs as a destroyer of trichina." This belief is based on his success with this treatment in destroying ordinary intestinal worms.

The Poultry House.

POULTRY ITEMS.

How long should a Thorough-bred Hen be separated from a Common Cock, in order to insure pure blood?

—Where purity of blood is required, it is not safe to allow your thorough-bred hens to associate with other cocks at any time, and they cannot run with them with any safety at all after January 1st preceding the spring that you design rearing your chicks. We never allow our choice thorough-bred hens to run with cocks of other breeds, and if we can help it, do not allow them with an inferior cock of the same breed. We have known thorough-bred hens allowed to run with other cocks until February, and in April the eggs were set with the full assurance that the blood would be pure, and the most of them had all the points of full-bloods; but I remember one in particular that only had the color—in every other respect it was just like the male parent that had run with them till February. Some of the progeny of those that were supposed to be pure, would breed back and develop points of the cock that run with the hens previous to February, as above alluded to.

Kind of Grain for Hens.—The greater the variety the better. In winter, corn and barley; and in summer, barley and oats, will do very well. It is a great error to have a great number of hens in one enclosure, or in a farm-yard. A farmer informed me, not long since, that he had near a hundred hens and got but few eggs. I advised him to reduce the number one half. He did so, and says that he gets more eggs from the fifty than he did from the hundred. His hens were not confined in a park, but ranged about the barn and lots. It appears that there was not material enough within their range to supply the hundred. When I say not sufficient material, I do not mean grain, as it would be as easy to throw grain to a hundred fowls as to fifty. I mean the material that they pick from the ground, with which we are not fully acquainted, but which their nature appears to require, in order to make them healthy and productive. Burnt oyster shells, pounded up and placed where hens frequent, are a great auxilliary to the process of manufacturing egg shells, especially when the hens are kept in a park.

Cocks not Necessary to Produce Eggs.—Hens will lay just as many eggs if not allowed to run with the male chickens, as if their intimacy were entirely unrestricted; and it is said that eggs produced without impregnation, will keep good much longer than those that are impregnated. We have not tested the matter. The subject, however, is worthy the consideration of those who furnish eggs in large quantities.

Surprise Plowing Matches!

We propose that all abled-body young men form themselves into Clubs to compete for the honor of being most successful at the Plow. It is a manly, healthful (and profitable, exercise. Let the Clubs meet at the farms of those who are short of field hands, and much good may be accomplished—and fully as much pleasure experienced, as can result from the Tournament or Base Ball. Organise!—Organise!

We can't plow, but we will join a Club to cut down the odious, disease-generating weeds now in possession of our village.—*Marlboro (Md.) Gazette.*

Good, brother George—we concur in the above—there is something modern and manly in the proposition. This crowing “queens of beauty,” by successful Knights at your mock Tournaments, is exceedingly fine as a “circus,” but there is no utility in it—any more than there is in your panting Base Ball champion. Let our girls unite in these Surprise Plowing Matches, and our word for it, they will become popular, highly exciting and health-generating. Who will enter the lists for the first *Knight of the Plow*? Here's a chance for the Maryland chivalry. Appreciating the great benefits to be derived from the organization of these Clubs, the Messrs. E. Whitman & Sons, Agricultural Implement manufacturers of Baltimore, have authorized us to offer to the first successful Knight one of their superior Plows, as an award of honor.—*Ed. Maryland Farmer.*

SOMEBODY'LL COME TO-NIGHT.

I must bind my hair with the myrtle bough,
And gem it with buds of white,
And drive this blush from my burning brow,
For somebody'll come to-night;
And while his eye shall discern a grace
In the braid and the folded flower,
He must not find in my tell-tale face
The spell of his wondrous power.

I must don the robe which he fondly calls
A cloud of enhancing light,
And sit where the mellowing moonlight falls,
For somebody'll come to-night:
And while the robes and the place shall seem
But the veriest freak of chance,
'Tis sweet to know that his eye will beam
With a tender, happier glance.

'Twas thus I sang when the years were few
That lay on my girlish head,
And all the flowers that in fancy grew
Were tied with a golden thread;
And somebody came, and the whispers there
I cannot repeat them quite;
But I know my soul went up in prayer,
And somebody's here to-night.

I blush no more at the whispered vow,
Nor sigh in the soft moonlight;
My robe has a tint of amber now,
And I sit by my anthracite;
And the locks that vied with glossy wren
Have passed to the silver gray;
But the love that decked them with flowers then
Is a holier love to-day.

— On most soils two horses cannot plough deep enough; to use four horses is inconvenient, and requires an extra driver. Harness three horses abreast and you have the best possible plough team.

The Apiary.

From the American Bee Journal.
PURITY OF ITALIAN BEES.

I was very much pleased with Prof. Varro's article, in No. 1, volume iii, of the BEE JOURNAL, on this subject. It is certainly the fairest and most satisfactory which has been given by any American bee-keeper in your paper.

There must be a great deal of harm done the bee interest of the country by the immense number of impure queens sent out yearly, by men who ought to know better than to go into the business before they had made themselves perfectly familiar with the markings of the Italian bee, as settled by "the best" European "apiarians."

It is surprising to see how boldly the gentleman who considers one band all sufficient, sets forth in his circular, as tests of purity, the very marks and temper, which any one who has read volume i, of the BEE JOURNAL, or Mr. Langstroth's writings on the subject, knows are certain indications of mixed blood. I procured last year an Italian queen (tested) from a gentleman of Baltimore, Maryland,* who has the Italians in their greatest purity. And, although I have opened the hive continually, both last season and this, to obtain brood for queen raising, I have not received a single sting, nor have I seen a bee, young or old, gorged or empty, that did not show distinctly three yellow bands. Prof. V.'s remarks about the price of pure queens are most sensible; no one could sell pure tested queens at less than \$15 or \$20, and be paid for the time and trouble he would have to spend with them. There is one thing more I was in hopes Prof. V. would notice—that is, the practice of sending out queens untested, with guarantee to replace them if their progeny is impure. This manifestly leads to the sale of many bastardized queens, for in most instances the purchaser never saw an Italian bee, and has to rely entirely on the descriptions of interested parties to judge of their purity. Would it not be the best, indeed, the only way to insure pure blood, for dealers to send out none but tested queens, and to charge fair living prices?

D. M. WORTHINGTON.

Elkridge, Maryland, July 13, 1867.

*We presume the author alludes to Mr. Richard Colvin, of Baltimore, who has devoted much time and means in introducing and rearing the pure Italian Bee, and who contributed a very valuable Essay to the Agricultural Report of 1863, titled "The Italian Bee; or the Culture and Italianization of the Native or Black Honey Bee," which is very full and comprehensive. Mr. Colvin has several very extensive Apiaries in and near Baltimore.

The Italian queens are more prolific, and keep their brood more compactly in the combs than black queens, and their swarms are usually earlier and larger than those from black colonies.

SEEDING TO TIMOTHY AND CLOVER.

A correspondent of the *Prairie Farmer*, propounds the following, to which the editor replies:

"I had intended sowing timothy and clover seed over my wheat land this spring, and rolling it in; but failed to get the seed until it was too late; though I expect to seed it this fall, and would like to sow rye for calf pasture and sow the small seed after it. Would either interfere with the other, and would the rye have to be harvested, or could a crop of hay be cut next season?"

As soon as your wheat is harvested, plow the stubble, and sow to rye; after it is well harrowed, sow the timothy and roll. You can feed off the rye in the fall. The clover seed should be sown at the latter part of winter, and the spring rain will wash the earth on and cover it.

Timothy sown in August will produce a good crop of hay, but when sown with rye both must be cut together.

We have never made trial with rye only for pasture, and do not know how it will answer to cut with the grass for hay, but suppose the rye would be the main crop. If the grass is intended for meadow, we should not sow to rye, but would sow to oats instead, for the autumn pasture for the young calves.

"The Maryland Farmer."

A distinguished Marylander, enclosing his subscription for two years to the *Maryland Farmer*, pays it the following high compliment, which a good many people think it well deserves:

ELLERSLIE, BALTIMORE CO., NEAR ELLICOTT'S MILLS, }
 September 21st, 1867. }

S. Sands Mills & Co.:—I have received your circular letter for the "*Maryland Farmer*" with the April issue of this year. It certainly has much to commend itself to the most favorable consideration of every gentleman who takes an interest in the advancement of Maryland agriculture.

Enclosed you will find subscription for this present year, beginning January, 1867, and subscription for the next ensuing year, to January, 1869, (\$3.) I shall have the volumes bound, and therefore want the back numbers of the present year.—These will form a valuable adjunct to the agricultural department of my library.

ASPARAGUS TOPS.—As soon as the tops of asparagus beds become yellow, they should be mowed off, put in heaps until they are dry, when they should be burned, and the ashes scattered over the beds.—Where the roots stand too closely together, producing many and small sprouts, unfit for the table or market, they should be thinned out, and transplanted in spots that may have too few. The reason generally that our asparagus sprouts are so small, is from allowing the roots to spread too much, which can be remedied by thinning out.—*Ger. Telegraph.*

Grape Culture.

SOIL FOR VINEYARDS.

The long established practice of highly enriching the deep vine borders of exotic grape-houses, formerly misled some cultivators into the practice of heavily manuring the ground intended for vineyards of hardy American varieties. It is now fully proved that land, of moderate fertility is much better. Rich soils produce a strong growth of canes and leaves, at the expense of the fruit, and render the wood more liable to winter-killing. A considerable proportion of clay in the soil, provided there is a perfect under-drainage, is better than light sand or gravel. The most successful vineyards are planted along the borders of large open waters, where the soil is composed of what is termed *drift*—giving a perfect natural drainage. The south shore of Lake Erie, from Dunkirk to Sandusky, extending a few miles inland, and the borders of Crooked Lake, in the Western New York, have proved to be admirably adapted to vineyard culture; and other places in proximity to open water, away from frequent fogs, and with a loose or shelly soil, will doubtless be found equally good. While such localities as these should be sought for extended or market cultivation, in nearly every portion of the country, vines for a family supply may be raised, by proper under-drainage, and the selection of hardy or productive sorts.

At the same time that moderate fertility is to be sought, constant cultivation must be given through the growing season. The best managers pass the cultivator once a week.

The slow-growing varieties, such as the Delaware, should have a richer soil than more rapid growers. Grapes on highly manured land will grow larger, and present a more showy appearance—but the fruit at the same time will be more watery, and of inferior flavor.

Distances for Planting.—The European practice of placing the vines about four feet apart, each way, and training to a single stake, has been adopted to a considerable extent. It succeeds best on poor and light soils, and with the slower growing sorts. Although it does well for a few years, it is not to be generally recommended. Young cultivators, also, fall into the error of placing their vines too near together, when trained with horizontal arms on a common trellis. They bear and succeed well while young, but as they become older require more room. It is a common practice to place the lines of trellis eight feet apart, and the vines twelve feet from each other, along each line of trellis. This distance appears to answer well; but some of the best managers give at least twelve feet each way, and others as much as sixteen feet. The space thus given, not only tends to a more healthy growth and freedom from mildew, but develops larger, finer, and more perfect grapes.—J. J. THOMAS, in *American Fruit Culturist*.

About Planting Bulbs.

We have given in previous numbers plain directions for planting bulbs, but as this week's issue goes to many new subscribers, we repeat them briefly. It is best to plant them from the middle of October to the last of November, but they may be put in in December when the soil is not frozen or too wet. The soil should be a good, rich, sandy loam; a stiff clayey soil is not good. When planted, the tops of the larger bulbs should be not less than three inches below the surface, small bulbs as crocus, two inches, better a little deeper than shallower. Bulbs look well in whole beds. The centre may be tulips, then hyacinths, narcissus, etc., having crocus as a border. If several beds are to be planted, plant one of tulips, another hyacinths, and so on, and edge each bed with a separate color of crocus. In small geometrical beds are properly planted, this has a very pretty effect. After planting, settle down the soil close to the bulbs by pressing with the back of a garden rake. When cold weather is about to set in cover the bed with three inches of manure, to be taken off early in the Spring.—*Western Rural*.

COST OF KEEPING SHEEP IN THE SOUTH.—A correspondent in the Monthly Agricultural Report from Union county, South Carolina, says:—It costs very little to keep the sheep we have here. I will state some facts in regard to my own little flock. I wintered twenty-two. These sheltered only on two occasions; once for a week or ten days in January, when snow was on the ground, and once during a cold rain. I fed them about two months. The cost was as follows:

Twelve bushels cotton seed at forty cents....	\$4 80
Salt for one year.....	1 50
Total cost.....	6 30

Cost for each sheep, 28½ cents.

From these sheep I have sixteen lambs. The wool will be worth from \$20 to \$25, and the increase, sixteen lambs, worth \$2 each by fall, \$32—giving me over \$40 clear. But sheep-raising receives little attention in a cotton country. I raise them only for the mutton. When dogs do not interfere with us, our mutton does not cost more than one cent per pound.

ORNAMENT FOR THE PARLOR.—An exchange says: suspend an acorn by a cotton thread so as to nearly touch the water in a glass vessel, a hyacinth glass is perhaps the best, set upon the window or mantel, and let it remain for eight weeks, more or less, without being touched except to supply the evaporation of the water, and the acorn will burst, and as it throws a root down into the water, a sprout or stem will shoot upward, throwing out beautiful leaves, thus giving you an oak tree in full life and health within your parlor.

Ladies Department.

Seldom have we ever seen sad words more touchingly attuned to notes of grief, than in the exquisite poem below.—Over the wild waste of ruined earthly hopes, they soar, triumphantly to the promise:

"Earth has no sorrow,
That Heaven can not cure."

Sad, indeed, is thy fate, and sadder the wailings of thy muse,
Jean! Bright, though, and beautiful is thy trust that—

"Her spirit, God is keeping
In the Heaven beyond our feeling—
Beyond the hearing of our weeping—
Waiting for my spirit's coming.

THE MARRIAGE VOW.

Fold her wardrobe, for 'tis priceless
To the weeping husband, wifeless;
Fold it for a sad remembrance,
For my eyes can ne'er behold it,
But the wearer still is with it,
And 'tis mournful now to see it;
Fold it in the form she left it,
In the plaits her hands had touched it;
Fold it—place it—for remembrance.

Rev'rently, each pearl and gem rease,
Reverently, each jewel in its place,
Neatly, each ribbon, silk and lace,
For the wearer now is dead!
God! thou knowest this is sorrow,
Hard to bear through each to-morrow
Of the world, so hollow hollow—
Recollection of the dead!

Fold them neatly with each other,
Bridal veil, and bridal 'kerchief,
Golden clasp and satin slipper,
Which the silent slumberer wore,
When our lives were wed in one,
When our hopes, a gorgeous train,
The bow of promise shone upon—
A welcome to the love we bore—
A promise of the dual reign,
Heart o'er heart, had each in store.

Fold them—fold them for the love—
(The auburn curl, and bridal glove)
Of her, my heart's dear dead;
For she never more will wear them,
Never from that folding take them,
Lying in her lowly bed;
For though fallen, God has given
Robes of splendor to the risen—
In the heaven around her spread.

Fold them—lock them up forever,
As the grave has locked the wearer;
They are emblems only, now :—
For the beauteous form is slumbering,
Its dear dust, with dust is mouldering,
But her spirit, God is keeping
In the heaven beyond our feeling—
Beyond the hearing of our weeping—
Waiting for my spirit's coming,
To renew the broken vow.

JEAN LA JEREID.

Marianna, Fla., March 25th, 1867.

JEPHTHAH'S VOW.

BY AN UNKNOWN HAND.

Soft and slow are the notes of the funeral knell. Slowly does the mournful train follow their departed one to the grave. Long do they linger round, viewing with pensive look and saddened heart the lifeless sod. Long and dreary are the days of affliction, when 'reft of those we loved—they, who have beguiled away our weary moments, and made the hours pass swiftly by.

The prisoner in his cell, calls each hour a day, each day a month—to speak of the flight of time, seems to him a paradox. He will tell you the wheels of time move slowly round, that to him, the bright beams of the morning sun bring with them sad moments and toilsome hours, and that ere he views their receding rays, faintly glimmering through his grated window, months and years have sped their onward course.

The sick and languishing patient, extended on a bed of pain and distress, waits with long and anxious expectation, for the rosy light of morn to dawn upon him;—racked with pain and writhing perhaps in the agony of despair, the long life that he has lived seems but short. Compared with the torture of the dying hour, how short is life! Oh! if frail and mortal man, would only pause and think, how fleeting are his days, the longest life would then seem short—far too short to prepare for an unending Eternity to which we are all hastening. Yes, methinks, that both philosopher and poet, statesman and orator, would then yield themselves at the shrine of the High and Lofty One; that the harsh discordant sound of the battle field would then no longer meet our ears; that strife and tumult of every kind would cease, and peace and harmony would reign triumphant o'er all its foes; that then the steady calm and quiet thought would yield its fruits, and the mind of man no longer wander in wild and forbidden paths, the victim of passion, and the willing votary of vice. That then, no longer, as in days of yore, man should be suffered, like the servant of God, to make such rash and solemn vows. Impossible, I had almost said, that man could thus have spoken.

Prompted by his confidence of success, blinded too, it may be, by the desire of fame, and led on by the impulse of the moment, those hasty words escape his lips. But oh! had he known the meaning of those words, as he then uttered them, or the import which they bore to the Court of Heaven, and which was there assigned to them by the King of kings and Lord of lords—had he then known the deep affliction and heartfelt misery that he was bringing upon himself, had he known on whom the rashness of that vow was to rest, or the depths of that fountain of sorrow, which he should open in a mother's heart, or had he known for himself, that at that moment, and in those words to which his lips had just given utterance, he had sealed the doom of his own beloved child, the pride of a father's heart, and the solace of a mother in her declining years—oh! had he known all this, and my heart sinks within me at the thought, surely, neither the name of a warrior, the wealth of nations, or the title of "Conqueror of the whole earth," could have induced him to have made this vow.

But let us follow him to the battle field. Armed with the spirit of the High and Holy One, never did an Alexander or a Cæsar go forth more confident of success, than did Jephthah. Behold him now, girt with armory and shield, wielding his sword over the slain and conquered. One by one, he views them falling beneath his power, till at last, he obtains the complete victory, and comes off the conqueror of his foes.—With joyful heart and high hopes, he hastes to bear the news of his triumph home. Behold the conquering Prince advancing—view his milk-white coursers as they paw the ground, and listen to the thunders of his gilded car, as it rattles over the stony streets. Garlands of evergreen are strown in his path, and every battlement is filled, to greet the conqueror returning from the war, crowned with glory's brightest chaplet.

Yonder a lovely train are seen advancing to welcome home their Prince with timbrels and the song. And who more fit to lead this band, who come with light and airy tread, than she, the loved one of her father—the idol of his heart. But oh! why shrinks he thus? Why does he thus retreat? What means those shuddering groans, and why does he hide his face from her he loves? He hopes it is not her. But oh! those hopes are blasted, as he beholds the cherished one, advancing

toward him! And he finds, but alas! 'tis too late, the words were long since spoken, that the fair and lovely form, which now stands before him must fall a victim to the rashness of his vow! His bosom heaves—his heart is ready to burst, and he exclaims in the anguish of his soul, "Alas! my daughter, my heart is bowed down to the ground for thee. And though in former times, thy sweet smile was the first, as now, to welcome me home—returning from the battle-field—that soft voice of thine, the first to greet a father's ears, and I've clasped thee to my bosom, yet not as then, does thy glad voice and laughing eye now fill my heart with joy, but oh! sad thought—with grief and sorrow! Yes, 'tis thou, my child, my only child, the daughter of my love! Thy very presence, that once brought gladness to my heart, now brings only sadness and despair. Those hasty words, to which my mouth gave utterance, and would to God I could recall them! But oh! they've passed beyond the power of my control! They have been heard by Him who sits upon the throne of majesty on high, and there recorded in his book of remembrance."

"But wherefore thus," she exclaims. "Is it aught that I have done, that causes those deep groans and heavy sighs?" "Ah no! my child; 'tis the rashness of thy father's words—the impulse of a moment, and oh that bitter moment, too! that now hangs so heavily upon me." Yes, and methinks I see her now, bending on her knees before that venerable sire, and hear her sweet voice, as she exclaims, "Do with me, father, as thou hast said." Trying moment this, to a parent's heart, to behold his fair and only child bowing at his feet, and beseeching him in a tone of earnest supplication to keep his vow, even though at the cost of her own life. Bitter, indeed, must have been this cup of sorrow! and deeply, too, must that father have drank of its dregs! But there was no retreat; his words had been spoken, and from them he could not swerve. Strange though it may seem, that vow was binding; he could not, he dare not go back. Oh! agonizing thought! that thus in one moment, he should have sealed the fate of one he would have almost died to save. She, who was all a mother's hopes desired, and all that a father's heart could wish, must fall the victim of his cruel faith—yes, it was her, the daughter of his tenderest care, and she must die. That snowy brow of hers that ere long would have worn the bridal, must now be decked with the sacrificial wreath. The joyful laugh and merry dance, that would then have resounded in our ears, must now give place to the mournful pomp and funeral dirge of death. How changed the scene.

In yonder grove, behold the altar there erected, Beside it stands the venerable patriarch, and his dearly beloved, his only daughter leaning on the bosom of her aged mother. Bitter tears, and anguish, such as the heart of a parent only knows, was theirs. She, whom they had fondly hoped would have been the solace and comfort of their declining years, was was soon to be no more.

And now the time was come. The father laid his child upon the altar, and frantic almost with despair, he then applied the flaming torch. Not so, the lovely one. She calmly saw the shrine, the flame, and smiled on death with all its horrors. She wept for him who had sealed her doom, and with her dying breath, she blessed his hoary head; she pressed his agonizing lips to hers, and hid her dying face in his bosom. 'Tis done! The patriarch lifts his voice on high, and seeks the throne of mercy, with a heart overflowing with penitence and sorrow. Bereft of the solace of all his woes—the idol of his heart, he now feels lone and solitary. He longs for the time of his departure, and waits with silent expectation for that day of triumph hereafter in which there is no alloy.—*From the Ladies Home Magazine.*

We cannot fight for Love, as men may do;
We should be woo'd, and were not made to woo.

DOMESTIC RECIPES.

SCURF IN THE HEAD.—The following ointment is recommended:—Lard, two ounces; sulphuric acid, diluted, two drachms. Rub them together and anoint the head once a day. To restore the skin to a healthy condition, proper medicine should be taken a short time.

TO KILL WARTS.—The following is said never to fail, if properly applied: Make a strong steep, from red oak bark, in hot water; when cold, apply as convenient, the oftener the better. In a few days the wart will disappear.

HOW TO MAKE A CEMENT FOR STOVES.—Take fine salt one part, and two parts of fresh, hard wood ashes; mix well together, then take cold water, and mix into a mortar. Apply to the crack either warm or cold, and you have a cement which will answer all common purposes, and will be very useful where the stove-pipe joints are not as tight as is desirable.

Still Another.—Take iron filings and mix to about the consistency of putty for glazing, with white lead and linseed oil. Fill in the joints as securely as possible, while the stove is cold, and let it stand a day or two before using.

TO PREVENT BREAD FROM DRYING.—Keep a wet cloth around the loaf that is being cut from and wet every time after a meal. This will keep the bread in a fresh state.

WHITE HARD SOAP.—Seven pounds of soda, three of lime, four gallons of water; boil together till dissolved. Let this stand to settle; then pour off as long as any remains clear, and add water to make four gallons. Boil this, adding four pounds of grease two tablespoonful of borax; boil till thick. Take up and put away to cool. When it is cold, cut the pieces rather larger than the size you want them, as it shrinks in drying.

Dr. RICHARDSON states that iodine placed in a small box with a perforated lid, destroys organic poisons in rooms. In cases of small-pox he has seen this method used with great benefit.

TO KEEP INSECTS OUT OF BIRD CAGES.—Tie up a little sulphur in a silk bag and suspend it in the cage. For mocking birds this is essential to their health, and the sulphur will keep all the red ants and other insects from the cages of all kinds of birds. Red ants will never be found in a closet or drawer if a small bag of sulphur be kept constantly in these places.

MARYLAND BISCUIT.—One pint of milk, one tablespoonful lard, flour enough to make a stiff dough; knead until the dough blisters.

TO REFINE TALLOW FOR CANDLES.—Boil the tallow in water just made slippery to the taste with ley. When cold cut out and scrape from the bottom all impurities. Then boil the tallow slowly half a day in a kettle of water in which 1 pound of saltpetre (to 10 lbs. tallow) is dissolved. When cold, and drugs scraped from it, boil again in water in which 1 pound of alum is melted. When cold melt with 1 pound of bleached wax and mould at your leisure. We took premium once on candles thus prepared, and they could hardly be distinguished from star candles.

REMEDY FOR BURNS AND SCALDS.—The best applications for burns and scalds, is a preparation of olive oil and pulverized lime, mixed to the consistency of a salve, spread smoothly upon a linen cloth and laid upon the burnt or scalded part. The relief to the sufferer in all cases, however severe, is almost instantaneously effectual.

CURING HAMS.—An exchange asserts that the practice of rubbing the fleshy parts of hams with pepper after they have been soaked in brine, will answer an excellent purpose, provided black pepper used in a paste with syrup, and red pepper is valueless for this purpose,

Original.

THE BELLS.

AFTER POE.

Hear the plaguey Breakfast bells—
Brazen Bells—
What a world of discomfort their clangor foretells!
How they jangle, jangle, jangle,
Before the morning light—
While one's dreams, in a tangle
At the chambermaid's wrangle,
Wake one in a fright.
Keeping time, time, time,
In a diabolic rhyme,
To the tinkling irritation that so noisily swells
From the bells, bells, bells, bells,
Bells, bells, bells—
From the wrangling, and the jangling of those bells.

Hear the cheerful Dinner bells,
Welcome bells!
What a world of happiness their melody foretells!
At the sultry hour of noon,
Not a moment too soon!
From the molten-golden notes,
And while they boast,
What a welcome music floats
To the hungry guest who listens, while he gloats
On the roast!
Oh, from out the sounding cells,
What a gush of euphony voluminously wells!
How it swells!
How it dwells
On the table! how it tells
Of the hunger that impels
To the swinging, and the ringing,
Of the bells, bells, bells—
Of the bells, bells, bells, bells,
Bells, bells, bells—
To the rhyming and the chiming of the bells.

Hear the gentle Supper bells—
Lovely bells!
What a tale of goodies, now, their turbulency tells.
In the listening ear of night
How they jingle their delight!
Their silvery tongues speaking
All in tune,
Of fragrant tea-leaf steeping,
And melodiously singing to the hearer,
Growing louder while the guests are drawing nearer,
Coming nigher, nigher, nigher,
With a famishing desire,
And a resolute endeavor
Now, now to sit or never,
At the table in that pleasant room.
Oh, the bells, bells, bells!
What a tale their music tells
Of the cakes!
How they tinkle, tinkle, tinkle,
As the stars begin to twinkle,
And Philomel her melody makes,
And the guest can easy see
By the twanging,
And the clanging,
When he's coming late to tea.
Yes, the guest distinctly tells
In the jangling,
And the wrangling,
How the Hostess' anger swells,
By the sinking and the swelling in the anger of the bells,
Of the bells, bells, bells, bells,
Bells, bells, bells—
In the clamor and the clangor of the bells.

LOUISIANA STATE FAIR.—We have received, thro' the politeness of the Secretary, a List of Premiums, &c. of this association. It will begin on the 5th and end on the 11th of November, at Baton Rouge. This exhibition was postponed last Spring until Fall, on account of the destruction of the levees and the consequent inability of the majority of the planting community to take part. Grounds are arranged and every preparation within the power of the association will be made for the reception of stock and manufactured articles designed for the exhibition. Address R. H. Day, president, or A. D. Lytle, secretary.

[Advertisement.]

Messrs. Editors:—Wheat growing is universally conceded to be very exhausting to the soil.

"The farmer who expects to prosper must study profoundly the subject of manures."

Any and all violations of nature's laws will meet with the punishment it deserves, whether that violation apply to us as individuals or in our requirements of the soil.

The health of this nation depends more upon the proper tillage of the earth than upon any other source.

The soil requires all the good stable and barn-yard manure it can get. No farmer can afford to neglect to *increase* his stock.

Elements of growth exist, however, only in scanty amounts in the ordinary barn-yard manure, for the principal reason, it is not cared after enough.

Liebig first promulgated the facts in relation to genuine Super-Phosphate of Lime, and the discovery is regarded "the great agricultural improvement of the age."

The introduction of Guano into this country has drawn off the attention of many from Super-Phosphate of Lime, and thousands upon thousands of tons are sold annually.

To every intelligent mind there should be two important requirements in every fertilizer, viz: *Food for the plant, and food for the soil.*

A fertilizer that does not embrace alike food for the growing plant and the soil, should not engage the attention of any agriculturist.

No one doubts that Guano stimulates the plant, and many are satisfied arguing and talking—never mind, "give me good crops on our tobacco and cotton, our wheat and rye, our oats and potatoes, and I can afford to fertilize every crop."

Too much ammonia is as bad as not enough. The large quantity of ammonia in Guano produces rapid growth. Is not that rapid growth at the expense of the soil?

Farmers and planters, think on these things.—Many of the Phosphates have Guano admixture, to give ammonia—that is, food for plants—and when those Phosphates are applied as a top-dresser, much of it passes off by volatilization, having nothing to hold it fast.

The importance that attaches itself to the question "How shall we save our lands from sterility?" should not be overlooked, nor should it be put off as of very little consequence.

Better meet this subject to-day; this month; this year.

All hail any article that does give both the plant and soil permanent food.

FRESH BONE SUPER-PHOSPHATE OF LIME.

THE SOUTHERN HOME JOURNAL.—We have received the first number of this Southern literary weekly, published by John Y. Slater & Co., Baltimore. Its literary character is of the highest standard, as will be indicated by the following corps of talented and popular contributors: John Esten Cook, of Va., Edward A. Pollard, of Va., Prof. M. Schele de Vere, James Wood Davidson, of S. C., Mrs. Fanny Downing, of N. C., Paul H. Hayne, of Ga., Wm. H. Carpenter, of Baltimore, Mrs. Margaret J. Preston, of Va., W. Gilmore Simms, of S. C., George H. Miles, of Md., T. C. De Leon, of Baltimore, Miss Fanny Fielding and a host of other prominent writers of the South. If the first number of the *Journal* is a taste of what its future will be, we can freely express our belief in its permanent success, and recommend it to our friends. Its typography is equal to any similar publication in the country.

BALTIMORE MARKETS ---Sept. 26.

Prepared for the "MARYLAND FARMER" by JOHN MERYMAN & CO., BALTIMORE.

[Unless when otherwise specified the prices are wholesale.]

ASHES.—Pot \$9.75; Pearl \$12.25@12.50.

BEESEWAX.—35@39 cts. per lb.

COFFEE.—Rio 15½@18½ cts., gold.

COTTON—

	Upland.		Gulf.
Ordinary.....	@ cts.	—	@ cts.
Good Ordinary..	22 @ cts.	—	@ cts.
Low Middling..	23 @ cts.	—	@ cts.
Middling.....	24 @ cts.	—	@ cts.

FEATHERS.—Common 43@48 cents; fair 52@65 cents.

FISH.—Mackerel—No. 1 Bay and Shore \$21@23; No. 2 \$13.25; No. 3 \$11; Potomac Herring \$5.50@6.50.

FLOUR—

Howard Street Super and Cut Extra.....	\$ 9.50 @	\$10.00
“ “ Shipping Extra.....	10.50 @	11.00
“ “ Retailing.....	11.50 @	12.00
“ “ Family.....	12.50 @	13.00
Ohio Super and Cut Extra.....	9.25 @	9.75
“ Shipping Extra.....	10.50 @	11.00
“ Retailing Brands.....	00.00 @	00.00
“ Choice Extra.....	11.25 @	11.50
“ Family.....	11.75 @	12.25
Northwestern Super.....	8.00 @	8.50
“ Extra.....	10.25 @	10.75
City Mills Super.....	9.50 @	10.00
“ Standard Extra.....	10.50 @	11.00
“ Shipping Extra.....	12.00 @	13.00
Baltimore, Welch's & Greenfield Family.....	14.50 @	00.00
“ High grade Extra.....	13.50 @	14.00
Middlings.....	0.00 @	0.00
Fine.....	0.00 @	0.00
Rye Flour.....	8.25 @	8.75
Corn Meal—City Mills.....	6.50 @	0.00

FRUIT.—Apples 6@8 cts.; peaches, 10 cts.

FERTILIZERS—

No. 1 Peruvian Guano.....	\$ 82 ½	ton of 2000 lbs.
Soluble Pacific Guano.....	65 ½	ton “
Rodunda Guano.....	30 ½	ton “
Flour of Bone.....	65 ½	ton “
Turner's Excelsior.....	70 ½	ton “
Turner's Ammo. S. Phos.....	55 ½	ton “
Coe's Ammo. S. Phos.....	60 ½	ton “
Lister Bros. Fresh Bone Sup. Phos.....	55 ½	ton “
“ Pure Bone.....	45 ½	ton “
Andrew Coe's Super-phosphate.....	60 ½	ton “
Baugh's Raw Bone S. Phos.....	56 ½	ton “
Zell's Raw Bone Phosphate.....	56 ½	ton “
do. Super Phosphate of Lime.....	60 ½	ton “
Rhodes' S. Phos.....	57 ½	ton “ bags.
Rhodes' do.....	55 ½	ton “ bbls.
Mapes' do.....	45 ½	ton “
Bone Dust.....	42.50 ½	ton “
Horne's Bone Dust.....	60 ½	ton “
Dissolved Bones.....	40 ½	ton “
Baynes' Fertilizer.....	45 ½	ton “
“ Fine Ground Bone.....	20 ½	ton “
“ Poudrette.....	18 ½	ton “
Plaster.....	18 ½	ton 2240 lbs.
“A A” Mexican Guano.....	33 ½	ton of 2000 lbs.
“ do. do.....	30 ½	ton “
Moro Phillips' Super-Phosphate.....	55 ½	ton “
Berger & Burtz's S. Phos. of Lime.....	\$2.25 ½	bbl.
Sulphuric acid, 4½ c. ½ lb.—(Carboy \$3.)		

GRAIN.—Wheat—Fair to good white \$2.30@2.50; choice red \$2.70@2.80; good do. \$2.50@2.60; inferior \$2.30@2.35. Corn—White \$1.27@1.29; yellow \$1.30@1.35; Oats—Good to prime 65@70 cts. Rye—\$1.40@1.45.

HAY AND STRAW.—Baled Timothy \$22@24; Rye Straw \$20@22; Oat do. \$15@17.

MILL FEED.—Middlings 35@38 cents; Brown Stuff 23@25 cents.

MOLASSES.—Porto Rico, 50@68 cts; Cuba clayed 46@48 cts.; Muscovado 48@56 cts.; English Island 50@65 cts.

PROVISIONS.—Bacon Shoulders 14½ cts; rib sides 17½ cts; clear rib 18 cts; clear 18½ cts. Lard 13½@14 cts.

SALT.—Ground Alum \$2.25@2.30; Fine \$3.00@3.20; Turks Island 58@60 cts. per bushel.

SEED.—Clover \$2.50@2.75; Timothy \$3.25; Flax \$2.75. SUGAR.—Porto Rico 12¼@13¼ cts.; Cuba 11@12¼ cts.

TOBACCO—

Maryland—frosted to common.....	\$ 0.00 @	\$ 0.00
“ sound common.....	4.00 @	4.50
“ good do.....	5.50 @	6.50
“ middling.....	7.50 @	9.50
“ good to fine brown.....	10.00 @	15.00
“ fancy.....	17.00 @	25.00
“ upper country.....	3.00 @	30.00
“ ground leaves, new.....	3.00 @	5.00
Ohio—Inferior to good common.....	3.00 @	6.00
“ brown and greenish.....	6.00 @	7.00
“ good and fine red and spangled.....	00.00 @	00.00
“ medium and fine red.....	7.50 @	15.00
“ common to medium spangled.....	8.00 @	15.00
“ fine spangled.....	15.00 @	30.00
“ fine yellow and fancy.....	20.00 @	30.00

WHISKEY.—In bond 30 cts.; free \$2.

WOOL.—Unwashed, 27@29 cts.; Burry unwashed 20@22 cts.; tub washed 37@40 cts.; fleece, 35@42 cts; pulled 25@32 cts.

BALTIMORE CATTLE MARKET, Sept. 19.—Old Cows and Scalawags \$4.50@4.75; ordinary thin steers, oxen and cows \$4.75@5.25; fair to good stock cattle \$5.50@6.75; fair quality heaves \$6.25@7; very best heaves \$7@8.

FFruit, Ornamental and Evergreen Trees, Vines, &c., for the fall of 1867, are offered in quantity by R. Halliday & Son, Baltimore—see advertisement.

SOUTHERN PUBLISHING CO.

155 W. BALTIMORE STREET,

P. O. Box, 1424, Baltimore, Maryland.

Works of E. A. POLLARD :

LEE AND HIS LIEUTENANTS,

Comprising the Early Life, Public Services, and Campaigns of

GEN. ROBERT E. LEE,

And his Companions in Arms.

THE LOST CAUSE,

A Standard Southern History of the Late War.

WEARING OF THE GRAY,

By JOHN ESTEN COOKE.

AGENTS WANTED ON Liberal Salary or Commission. Send for Circular. sep-3t

The Automatic Sash Fastener.

Patented July 23d, 1867, by Geo. King, John Gmlen and L. T. Shope.

We claim the arrangement of Racks *bb*, fastened on the sides of the Sashes B, behind the molding A, and held engaging with the metal projections C, upon the inside of wooden frame by means of the Springs DD, all constructed, described and arranged in such a manner that the Sashes shall be pressed outward to be raised or lowered as herein set forth. The above unrivalled SASH FASTENER is the most durable and complete substitute for Sash Weights ever invented. Cost very little, and can be put on Sashes by any one without the least trouble, and warranted.

County and State rights for sale.

R. W. RASIN,

oct-tf 51 W. Fayette Street, Baltimore, Md.

EYRE & LANDELL,
Fourth and Arch Streets,
PHILADELPHIA,

Are offering a NEW STOCK OF

DRY GOODS,

For the Fall sales of 1867.

SHAWLS, SILKS, DRESS GOODS,

AND

STAPLE DRY GOODS.

N. B.—Job lots of goods received daily. 1t*

SAUL'S NURSERIES,

Washington City, D. C.

The undersigned calls the attention of Planters to his extensive stock of well-grown FRUIT TREES, which he offers low. Peach Trees, a large stock of finely grown trees. Apples, Pears, standard and dwarf. Apricots, Nectarines, Cherries, Plums, &c.; Grape Vines—Adirondac, Iona, Isabella, Delaware, Concord, Rogers' Hybrids, &c., with the finest exotic varieties. Blackberries—Kittatinny, Wilson's Early, Lawton, &c. Strawberries—Perpetual Pine, Philadelphia, Metcalf's Early, Durand's Seedling, Ripawams, Dr. Nicaise's, Ida, Mead's Seedling, with the great market berries of Washington, Seedling Eliza, Jucunda, Triumphe de Gaud, Wilson's Albany, &c. Raspberries, Gooseberries, Currants, Rhubarb, and Asparagus Roots, &c.

Evergreens, Roses, Ornamental Trees, &c.

Monthly Carnations, new Chrysanthemums, Dahlias, Phloxes, with other new and rare plants.

Bulbous Roots of finest quality, just imported from Holland, consisting of double and single Hyacinths, double and single Tulips, &c.

Catalogues mailed to applicants.

JOHN SAUL,

sep-2t

Washington City, D. C.

200 BAGS CLOVER SEED

200 BAGS TIMOTHY SEED.

100 BUSHELS NEW CROP RAPE SEED.

100 BUSHELS TURNIP SEED.

For sale by

C. B. ROGERS,

Seed Dealer,

aug-3t No. 133 Market street, Philadelphia.

PERUVIAN GUANO.

Direct at Baltimore from Chincha Islands. For sale at lowest price.

JOHN MERRYMAN & CO.,

Farmers' and Planters' Agency, Baltimore

Hightstown (N. J.) Nurseries.

120,000 PEACH TREES,

Of all the leading market varieties, of which

20,000 are HALE'S EARLY.

The earliest by two weeks, and hardiest of any known variety. Also,

APPLES, PEARS and CHERRIES,

Both Dwarf and Standard.

PLUMS, APRICOTS, NECTARINES, &c.

HALE'S EARLY BUDS from bearing trees.

A large stock of Strawberry plants, including Agriculturist, Wilson's Albany and Jucunda.

Blackberries, Raspberries, including the Philadelphia, and other Small-fruits.

Osage Orange for Hedging.

For Circulars, address

ISAAC PULLEN,

sept.-2t

Hightstown, N. J.

Strawberry, Raspberry and Blackberry

PLANTS IN VARIETY,

The most Profitable of which are the

PHILADELPHIA RASPBERRY, WILSON EARLY, AND KITTATINNY BLACKBERRIES.

GRAPE VINES, CURRANT BUSHES, ASPARAGUS ROOTS, &c.

List of Prices sent to all applicants.

JOHN S. COLLINS,

sep-tf

Moorestown, New Jersey.

NURSERY AND FRUIT FARM,

Moorestown, Burlington Co., N. J.

JOHN PERKINS, Proprietor,

Offers for sale this Fall, 100,000 PEACH TREES, well selected to suit the markets. A large portion of Hale's Early, with Pear, Apple and Cherry, dwarf and standard. Also, Small Fruits, such as Blackberries, Strawberries and Raspberries, embracing all the leading varieties, all of which will be furnished either in large or small quantities.

Circulars furnished gratis, with prices attached.

Also, Evergreens for Ornamental Hedging. s-3t

PEACH TREES. PEACH TREES.

30.0000 PEACH TREES,

FOR SALE.

Remarkably Fine, consisting of the most choice varieties. Budded from the celebrated Orchard of H. H. RASIN, Esq., Kent county, Md.

Selected in quantities to suit purchasers.

E. K. COOPER,

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Baltimore.